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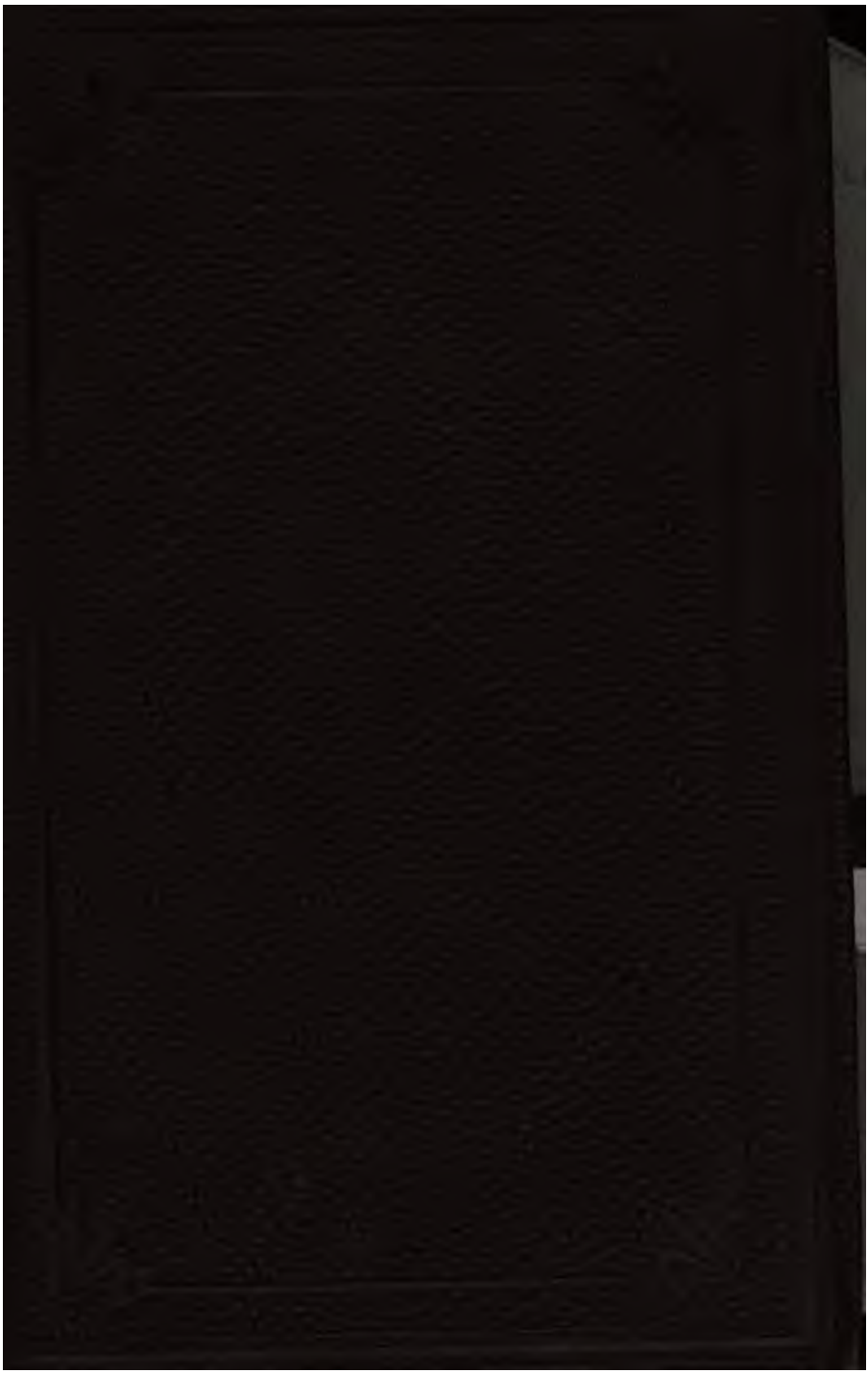

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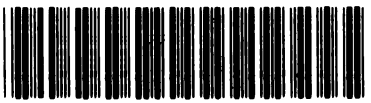
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THE PRINCIPLES AND PRACTICE

OF

COMMON-SCHOOL EDUCATION.

THE PRINCIPLES AND PRACTICE

OF

COMMON-SCHOOL EDUCATION

BY

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PART I.

PRINCIPLES OF EDUCATION.

CHAPTER I.—GENERAL PRINCIPLES.

1. Means of Education.—Education comprises all the influences which go to form the character. In early infancy, before the child has acquired that power over thought and language which fits him for direct intercourse with those around him, he is educated by the experience which he acquires through the natural activity of his instincts. In childhood and youth his education proceeds under the superintendence of the family circle and the school. In mature years, he is again thrown upon the resources of self-education, but now with the power of controlling these for definite ends; and he finds in the intercourse of society, in his own reading and reflection, and in the ministrations of the Christian Church, the means by which his nature is to reach its destined measure of perfection. The education of childhood is often spoken of as if it were pre-eminently the education of the whole man. It is not so, however; the education which the man carries on of himself in maturity, when he has come to the possession of all his powers, is that which determines his character and position. The peculiar importance of the education of childhood lies in the consideration, that it prepares the way for the subsequent self-education of manhood. It brings the man into command of his faculties, and enables him to use his opportunities of progress; it equips him with intellectual, moral, and practical principles, but for which he would pass through life without any purpose of self-improvement, and without the power of profiting by its experience.

2. Duty of the Family in Education.—The family circle and the school share between them the responsibility for the education of childhood, but not equally; for the family is responsible

primarily and essentially, the school secondarily and by delegation. The obligation resting on the family to educate the child extends thus far: by precept, and example, and sympathy, it should bring him up in good sentiments and habits; by constant familiar conversation it should develop his latent capacity of language, and exercise his intelligence on the things around him. For the rest, to whatever extent it cannot carry on the work itself—and it cannot be expected to advance the child in the technical branches of study—it should lend its friendly aid and encouragement to the school, on which it relies to supplement its own efforts. The advantages which the family has for discharging its responsibility are chiefly these two: indefinite strength of affection between parent and child, whereby the one is impelled to seek the true welfare of the other; and indefinite contact in the daily engagements of life, whereby the parent has the child's actions under his constant inspection with a view to the formation of habits, and has adequate opportunity of intercourse to quicken into life the seeds of his intelligence.

This conjoint responsibility deserves the more emphatically to be insisted on, at a time when the element of family responsibility in the child's education has come to be almost lost sight of. The duty of the family in this matter is neither optional nor transferable: no plea can be sustained for neglect. It is as bound to educate the child, as it is to provide for his bodily sustenance. If in any state of society this discharge of duty by the family is found to any extent impracticable, then the blame is so far removed from the parent in particular to society itself at large; but the blame rests somewhere. This plea is in general, however, unreasonably urged: keeping in view what has been stated as the measure of the family obligation, there cannot be many families where the opportunity or the ability is entirely wanting to discharge it.

It is thoroughly relevant to our present purpose thus to insist on the part the family should take in early education. Only when we estimate that accurately, can we estimate accurately what remains for the school to do; only when that part is faithfully performed, is the school placed in circumstances for efficiently performing its part.

3. **Function of the School.**—Failure to perceive the responsi-

bility of the family necessarily leads to a distorted view of that of the school. If in our practice we trust everything to the school, we are of course interested in magnifying the influence of the school as all-sufficient: we readily come to conceive of it as the great means of mentally and morally enlightening the people, and to speak of it as the institution on which the welfare of the people is, more than on any other, dependent; in short, to attribute to the school the power which belongs to education with all its means collectively. Now the work of the school is one of great dignity; even when it is kept within its legitimate place there are ample grounds for magnifying it. It is desirable, moreover, that the teacher should magnify his office; high views of his duty being the surest stimulus to labour after a high standard of excellence. The public judgment is formed of a school generally by witnessing a few brilliant results of a sort not difficult to be attained by any one who will condescend to labour for them alone. Its applause is quite within reach of the most undignified mechanical drudgery. And this accordingly is the teacher's temptation, that he shall content himself with appearances, instead of seeking, by a higher and more self-denying labour, to cultivate in his pupils good intellectual and moral habits, which pass for little or nothing in the vulgar judgment, because beyond its appreciation. Against this temptation nothing but a profound conviction of the true dignity of his office will preserve him. But, on the other hand, an exaggerated view of the functions of the school can only lead to mischief. It turns the attention of the teacher away from what he can certainly attain, and sets him in chase of what is impracticable and delusive. If he be sincerely enthusiastic in his views, his sense of disappointment must be overwhelmingly great, when he compares the results he has attained with the expectations he has formed. But there must be often in his mind a lurking disbelief in the lofty views he hears propounded; his own good sense, and the comparatively low position society assigns to the teacher, must often guard him from being thus deceived. In either case a reaction may be relied on to take place. The faith, or, as it may be, the pretension that the school can do all, will be succeeded by the doubt whether it can do anything, or by the unconscientious withholding of that labour which is needed that it may attain its legitimate results.

The function of the school, when properly ordered, is to support and supplement the education of the family. Equally with the family, the school is bound to maintain the pupil's bodily health; it must foster the growth of the morality and religion which the family implants, so far as its opportunities admit; it must train the pupil to certain virtues which spring out of, and find an application in, the social aspect of the school, and for cultivating which the family has comparatively little means; it must educate his mind, on the one hand, in the acquisition of certain instrumentary branches which are required in all conditions of life, and on the other, into the love of knowledge in general, and the mode of acquiring it; it must accustom him to habits of steady and strenuous application. Where the family education is deficient, the school will naturally do its best to make good the defect; to implant those fundamental principles of morality and religion which the child should bring to school with him; to strive after quickening, by individual intercourse, that free and spontaneous intelligence which is so characteristic of the family education. But whatever the school may attempt in special circumstances, it is essential that the teacher should clearly discriminate his own province, in order that he may be sustained by that reasonable faith which is necessary to the continuance of all earnest labour.

4. Scope of School Education.—School education, like education in general, has to deal with man in all the aspects of his nature, as a physical, moral, and intelligent agent.

From the influence which it exerts on his moral and intellectual nature, the teacher is highly interested in preserving the well-being of his pupil's physical nature. No exertion of mind can be carried on efficiently or permanently with a languid or indisposed body. The forcing of it in such circumstances will only injure both; the one, by accustoming it to a languid mode of work and an imperfect estimate of its power; the other, by draining it of energy which it cannot spare from the exercise of its own peculiar functions. It is an equally certain, though perhaps less clearly recognised, fact, that the state of the body has a strong influence on the moral sentiments. When vigorous, it is best able to resist those appetites, the indulgence of which lowers the tone of the whole nature; and is free from the dominion of ideas and ima-

ginings which are apt to haunt the mind not sustained by the animal spirits of a healthy frame. The state of the bodily health and spirits is therefore an object of great importance in school; all the more considering that their *force* is so great in youth compared with that of the other parts of the child's constitution.

A distinct provision should be made for cultivating the moral nature. On it, more than on any other part of our nature, depends our happiness, and the use we shall make both of the physical and mental powers which we may be endowed with. Yet how seldom is it specially cared for! Apparently the least connected with external success and respectability, it has generally to struggle against many obstacles after even a moderate degree of cultivation. Intellectual exercise is what is most attended to in school: and the hope is entertained that somehow moral advancement will be secured along with, and through, it. To a certain extent this hope is well founded, as habits of strenuous intellectual application imply the presence of some valuable moral habits. These, however, constitute but a small, and not the highest, part of morality: whose claims cannot be said to be satisfied at all, when left to be enforced only on the chance opportunities which may occur in the course of an education, in which the cultivation of intellect assumes the chief place.

On its intellectual side, the school should seek to develop the powers of mind so that the pupil may have the full use of them in after life. This consideration should determine the whole work of the school. Present knowledge is not given for its own sake, or with a view to future professional occupation, but that the pupil who has gone through the process of acquiring it, may gain therefrom the power of acquiring for himself as much more as he needs, and the disposition to do so. And according to the degree in which it tends to give this power, is any branch of knowledge a suitable or an unsuitable instrument for school purposes. The school has a general, not a special, design; it does not consider how much of this subject or of that will be required to fit the pupil for such and such a position; but how it can best discipline his mind. The elevation of character implied in the attainment of this end, will better prepare him for the position he may be called on to occupy, than any accumulation of knowledge presented to him from its apparent exclusive adaptation to its requirements.

5. Harmony of Development.—Whilst the school should take cognizance of all the parts of our constitution, it should educate them in their natural connexion.

In the life of a good man, his whole intellectual activity is guided by the requirements of morality, and subject to its influences; under such guidance alone can it attain the highest ends of which it is capable. For this harmonious exertion of his powers, the pupil should be prepared by the education of his childhood. The knowledge which he acquires by his efforts of mind should therefore be commended to his regard under the sanctions of moral duty, and should be carried out to practical moral issue in rules of life. Mere intellectual power or cleverness should not be exclusively held up to him as that after which he should strive; for he may attain this, in great measure, and yet be neither happy himself, nor useful in promoting the happiness of others. On the other hand, there can be no sound cultivation of his moral nature which does not enlist his intelligence in its behalf. The rules of morality are indeed simple and level to the apprehension of the most ignorant; but the mere apprehension of these rules as such will never raise a man high in the scale of moral dignity. Life is full of situations in which judgment is required in their application, and in which any one who has never had his moral judgment trained will find himself quite helpless. When the intelligence has been exercised on the grounds and bearing of the rules, and been actually tested in applying them, they become themselves much more pregnant with meaning, of more commanding obligation, and therefore incalculably more serviceable as guides through life. What we have said of moral instruction in its widest sense is to be understood as applying equally to religious instruction, which falls under it.

Education should be neither exclusively intellectual, nor exclusively moral, nor exclusively religious. "It should be at once religious, moral, and intellectual. It should be religious that it may be more assuredly moral: moral, to be correctly religious: and intellectual for the sake alike of religion and morality. Each requires the aid and concurrence of all towards its own complete development."[1] Of course these three departments of education have each their several courses of instruction designed to promote them. A lesson cannot be designed to promote intelligence, morality, and religion, equally

[1] Willm's *Education of the People*, part i. chaps. 1-5.

at one and the same time; a lesson must have one main object, and not more: hence we have the departments of intellectual instruction, moral instruction, and religious instruction. But whichever of them occupies us for the moment, the spirit and influence of the others should never be wanting: and thus shall we keep the three in firm connexion. Where they are pursued apart, and with a plain line of separation between them, as things that have no points of contact, never cross each other's path, and need not acknowledge each other's authority, the education given will certainly become one-sided. It will settle down into an intellectual education alone; for the attention of both teacher and pupils will fasten itself on that aspect of education which both will feel to be of most practical and present utility, that is, the intellectual; the others will become mere forms, with a certain conventional respect attached to them, it may be, but still only forms. The life and reality of all three depend on their organic union being maintained.

6. **The Law of Exercise.**—The several parts of our nature grow in strength, by exercise suitable in kind and in amount.

By physical exercise the organs of the bodily frame are invigorated and developed, and by no other conceivable means.

By the exercise of its several faculties, likewise, does the mind reach its power to use them. No faculty can interchange with any other in this matter, though it sometimes seems to be thought so. The faculty of language is developed by speaking; of observation by observing; of imagination, by imagining; and of reason by reasoning; if we exercise but one, we shall educate but one; if we over-exercise one, the excess does not flow over to the benefit of another. We may fully develop the observation and the imagination, while we leave the judgment weak: whilst no labour which we bestow on the exercise of the reason will ever teach the pupil how to observe.

The moral powers, equally with the physical and intellectual, require their own appropriate exercise. Morality being a quality of actions, it is by regulation of the conduct according to its laws that morality is inculcated. Intelligence does not secure this, though it seems to be often thought so. If we wish to educate the pupil to truthfulness, we must secure that he speak and act truthfully; to honesty, that he act honestly in cases where his honesty is tried; to diligence, that he apply himself to strenuous work.

He may understand the grounds of these virtues; but that understanding has no necessary influence on his life.

But exercise when carried to excess becomes injurious by fatiguing the powers. This caution has no application to morality, from the nature of the case; and in school, but little to physical education, since children are at that stage of their existence which requires constant bodily activity, and no bodily exercise of which the school admits is likely to be felt as excessive. But the caution is very necessary in educating the intelligence. Where intellectual exercise is systematically carried to excess, the bodily strength is exhausted by it, and particularly the strength of the brain, the organ which is more immediately stimulated by mental activity.

School education thus requires to carry on three distinct lines of exercise; physical, intellectual, and moral. The result must be deemed equally certain in all cases, though it often seems not to be thought so. It is a matter of certainty that bodily activity invigorates the child's frame, and that judicious instruction in suitable subjects gradually expands his mind: there is the same certainty, neither more nor less, that the means for moral education will attain their end; and that the child will become virtuous who is accustomed to act according to the requirements of virtue. If the results of moral education are not attained in the same proportion as those of physical and intellectual, it is not because the means are inadequate, but because they are not applied with the same faith and perseverance.

7. Labour and Self-Denial.—It is a common and a true saying that there is no royal road to knowledge: it is equally true that there is none to morality. The way to the one is through labour, to the other through self-denial: nor according to our present constitution can we conceive it to be otherwise; the connexion is necessary and inevitable.

The only valuable knowledge is that which the pupil acquires for himself, for that alone is in every sense his own. The teacher may aid his efforts in various ways, but cannot supersede them; he may lighten the labour, but the labour remains to be done. And as knowledge is useful only when acquired in system, the labour which the pupil must bestow is not desultory and capricious, but continuous and strenuous. To hope to educate him otherwise is

a delusion ; to conceal from him its necessity is a mistake. From the first, then, he must be brought face to face with his work ; he is not to be taught that it is trifling and easy, or that it may be treated as an amusement. On the contrary, he must be made to feel that it is serious and often difficult, at the same time that it is neither impracticable nor necessarily unpleasant, but quite within his power to perform with such aids as the teacher gives.

And so morality is not to be spoken of lightly, as a thing into which the pupil will fall as it were of course. His instincts are at first all selfish, seeking their own gratification, and regardless of the wellbeing of others. Let him be helped to master them, but let him neither be flattered nor deceived. When he exhibits any virtue of self-denial, the sacrifice should be borne by him, and not deprived of its character by some compensation : which will teach him always to look for recompense. Require self-denial from him, associate it with the higher reward which it naturally carries with it, and let him learn, as he is able, that the measure of his self-denial is the measure of his morality.

The teacher may estimate his success in educating his pupil by the degree in which he fosters a frame of mind disposed for steady work, and a temper willing to practise self-denial.

8. The Principle of Co-operation.—The pupil must be constantly working towards his own success, and it is hopeless to look for this unless we secure his willing co-operation. If the pupil's share in his education is to do the work prescribed to him, the teacher's is to induce him to do it. From the weakness of childhood, a certain amount of compulsion indeed is necessary ; but it is preposterous to contemplate the teacher as constantly dragging or driving his pupils along a path which they are unwilling to tread. This will wear out the spirits of both, whilst, so far from implanting the inclination to work, it is certain to produce positive aversion ; compulsion should be kept in its place as subsidiary to attraction.

It is not meant that the teacher is only to accept work from the pupil in such subjects as are pleasing to his tastes ; but that he is to create a willingness to labour in all which are deemed necessary to his wellbeing, whether these be in themselves grateful to him or not. This is the triumph of the teacher's art. For this purpose he must associate in the pupil's mind pleasure of some

kind with the work, whether it be intellectual or moral; he must sympathize, encourage, and exhort; he must watch for and obviate the difficulties which the pupil feels or imagines in his path; in particular, he must adapt the work in its kind and its amount to the pupil's capacity, leading him on gradually from that which is simple to that which is more difficult. Generally his aim must be first to make the pupil feel a want before he points out how it is to be supplied; and then he must keep him convinced that he is able by his own labour to supply it. The great stimulus to labour is the hope of success; without this motive—and children are so weak that they will not readily feel its force of themselves—they will not even make the attempt, but assume its impossibility. The prestige of success has a mighty influence on the pupil. What he has been shown he can do, he will willingly try again; "no one hates what he can do tolerably well, even though it be dry and uninteresting" in itself.[1] Where something is felt to be gained as the result of an effort, however small, there is a feeling of self-gratulation which disposes to a repetition of the effort; whereas the conviction that it is of no use to try is a kind of mental paralysis, from which it is the first and last object of good teaching to save the child.

9. General Measures.—It is the peculiarity of school education that it must be conducted so as to act upon large numbers simultaneously. If the teacher break up the mass of his pupils, and take the units separately, his influence over each will be inappreciably small. His measures, both of instruction and of discipline, should not be adopted with exclusive reference to the cases of individuals, but so as to reach in their influence over a class, or the whole school. This is a more difficult thing than simply to deal with individual errors or vices; it is indeed a very difficult work. But unless the teacher accomplishes this, he will accomplish little in his school at all; he may correct, but he cannot be said to influence or educate. And this applies equally to his intellectual and his moral working.

Instruction is a continuous process, as between the teacher on the one hand and the pupils on the other; and that all may be instructed, the process must be a continuous one in the mind of each pupil. From the nature of the case, the teacher addresses

[1] *Quarterly Review*, No. ccxvi.

himself to individual pupils consecutively as representing the class. What we wish here to impress is that the individual is not to be viewed as a unit, but as a representative. All that passes between the teacher and him, whether it be mental exercise or the communication of knowledge, should be made by the teacher the possession of the whole class. In no other way can an educative process be applied to a number at once, whilst in this way it is not only conceivable, but altogether real and practicable. Hence the vital necessity for the teacher of a school to have the power of sustaining the attention of a large number ; it is that he may accomplish that which is the essence of his work, the instruction of the many through the instrumentality of the one.

The teacher who has this power will not only carry forward all his pupils together in the same exercises, but will turn the peculiar talents of individuals to the benefit of all. One pupil has the gift of fluent narrative, another of quick observation, another of keen imagination, another of shrewd moral judgment, another of thoughtful inference, and another of mechanical skill in construction. In the conduct of a single lesson there will be room for more than one of these gifts. They must be appealed to, both as an actual means of working out the instruction, and as an example to those who have them not. Every class has a large latent fund of this self-educative influence, which only needs to be drawn out, and which is very powerful from the fact of its being exercised by the pupils over each other. And the skilful teacher, remembering that it holds true of a class as of an individual, that nothing should be communicated which can by reasonable labour and in reasonable time be discovered by itself, should be continually appealing to it.

In teaching morality, the teacher who confines himself to correcting individual faults as they occur, accomplishes but a small part of his work. These should be viewed in school as indicative of dispositions more or less general, which, though proved to exist in the pupils who have committed the fault, may well be suspected to exist in others and be equally deserving of amendment. The faults of individuals may be handled either in such a way that they shall become centres from which good influence may be distributed over many, or that the amendment which results shall be confined to the individuals themselves. They

must by all means be corrected; but he is the skilful educator who derives therefrom an influence on the disposition, not of one only, but of many; for, so far as he succeeds, he cuts away the root, not of one fault, but of many.

By such a procedure the weak points of a school become its strong ones; obstacles to its work are turned into aids. The variety of gifts and attainments that would seem to obstruct the progress of collective instruction, if not to render it impossible, is made to contribute to its usefulness and educative power. The occurrence of many faults, which seems to bring the pupils into constant contact with evil and to surround them with temptation, becomes the means of giving them a wider moral experience, a better trained moral judgment, along with the caution and self-watchfulness which these naturally inspire.[1]

10. Attention to Individual Character.—In seeking to promote the general welfare, we must keep in view individual character; in making each contribute what he can to the improvement of the whole, we must not overlook what he requires for himself.

Pupils differ amongst themselves, not only in respect of their mental gifts, but also of the manner in which they apply these. One is slow and thoughtful, another acute and quick; one is quiet, another demonstrative; one is able but careless, another weak but careful and steady; and so on. A perception of these characteristics is necessary to the welfare, not less of the class, than of the pupil himself. It will show what contribution he can make to the general stock; it will also suggest what his own special requirements are. Thus, if he has steady memory but deficient judgment, whilst it will be proper to keep up the strength of his memory by exercise, the teacher will still chiefly aim at presenting suitable materials for the exercise of the judgment. His object must be, not simply to call forth mere exhibitions of capacity for which nature has given special talent, but to educate the powers which are comparatively weak, up to a state in which the whole mind may act harmoniously. At the same time, education will never alter the essential complexion of the pupil's mind. Differences in this power and in that are as durable as they are inevitable. The mental discipline of a class should not aim at producing the same type of average pupil; but, recognising

[1] Abbot's *Teacher*, chaps. iii. and iv.

nature's differences, should aim at strengthening in each pupil the power in which he is weakest, that his peculiar cast of mind may accomplish its own work in the most favourable circumstances.

There are differences in moral character and capacity equally as in intellectual. From natural disposition or from previous circumstances, the teacher will find some comparatively deficient in virtues, to which others seem drawn by innate affinity or strongly acquired habit. In striving to inculcate these he must moderate his exactions to the exigencies of the case with which he has to deal. There are also differences in the complexions of sound moral character just as there are in intellectual, and they are attended with the same advantages. Pupils who are equally virtuous may, according to their temperaments, exhibit their virtues in different ways; both equally right, if not equally expedient. Thus, one is bold, another hesitating and timid; one is sanguine and forward, another shrinking; one is quick and almost violent, another patient and enduring. These various tempers can never be obliterated or made to pass into each other. There is no average standard of moral character to be aimed at. The virtues do not admit of degree; but the manner of their exhibition admits of endless diversity. And in enforcing them we must have respect to the natural temper and constitution. All varieties of these, whatever value we assign to each in formally contrasting them, have their good sides; and we shall do well to fix our attention on these, instead of striving in vain to effect an entire change of temper.

The sum of what has been said is that the teacher should form to himself a distinct estimate of each pupil; so that the mental and moral character of each may be recognised by him as a distinct reality, made up of so many qualities good and bad, and that, when he has formed an estimate of tendencies and requirements, he should come to an equally clear understanding with himself as to the measures which he should adopt to meet these. He cannot otherwise have any reasonable prospect of confirming what is good in them, or of remedying what is bad; he must, in fact, work in the dark and by chance.

Though the school cannot study individual character with the same minuteness, and adapt its measures thereto with the same certainty, as the family, it is under no necessity on that account

to adopt a discipline, mental or moral, altogether indiscriminating. If it be only quick to observe, it cannot but find opportunity more or less of accommodating its discipline to individual peculiarities; and the more it does so, the greater will be its influence.

CHAPTER II.

CONDITIONS OF MORAL EDUCATION.

11. Earliest Aspect of Moral Training.—Moral education in its earliest stage is a matter, not of the understanding, but of the feelings. The infant cannot comprehend the nature and the grounds of its duty; this is a task often sufficiently trying to the adult. Yet before it can do this, before even it has the gift of language to receive instruction at all, its education in morality is in progress. The parent expresses his sentiments by word, act, or countenance, and the child divines their import by that penetrating power of interpretation, which characterizes its state of entire dependence, or rather, we may say, its community of physical and spiritual life with the parent. The sympathy which binds them together, intimate beyond any parallel, works with a weight of influence on the speechless unreasoning infant, which the most cogent instruction will aim in vain at exercising on the comparatively matured mind of youth. Along with the exhibition of the parent's feelings by word or gesture, we may rank as co-ordinate in power, though a little later in time, the influence of example; which is not a different source of influence from the former, but only a different channel. Example carries with it all the influence which can attach to the expression of feeling by word or gesture; and, over and above, a weight peculiar to itself, from the palpable copy it sets before the child, whose quickness to receive instruction through this channel is proverbial.

12. Association.—The child's identity of interest with the parent and his entireness of dependence, readily secure his conformity to the sentiments and examples exhibited to him. They give the parent an authority which is irresistible in early years; and which, if exercised with a vigilant and steady pressure, will

bend the child's will to any course of action that may be desired. But the only guarantee for the permanence of the impression that seems to be made on him is, that it shall be the source of conscious pleasure to himself. Remote as the period is of his own active independent co-operation, we must now sow the seed for the rich harvest we then expect to gather in. The next step in education, accordingly, to exhibiting correct sentiments and example to the child, is to create the motive which shall prompt him voluntarily to adopt them; this we do through *association*. The child comes to associate certain properties with fire, light, and solid bodies in general, by experience, often at the cost of considerable suffering; according to this analogy, he is to learn the character of actions by experience in their consequences. But since moral association is not self-acting, at least not steadily so, in the manner that natural association is,—since without the intervention of others he might do many things right or wrong, without being instructed by any consequences attending these acts, it falls to the parent, who is responsible for his education, to provide a uniform bond of association, in virtue of which the child shall be led to desire to do what is right and to avoid what is wrong. This he can do by the manner in which he distributes his approbation and disapprobation. These constitute the first standard of the child's morality: the one attracting him to right, by the pleasure it gives him; the other repelling him from wrong, by the pain which it entails. Moral acts not in themselves conveying pleasure to the infant, it depends on the way in which association is brought to bear on him, whether he shall ever come to take pleasure in them or not. They may be even made to change places in his regard with acts which are immoral: as we see in the life of all nations, and of many families. Selfishness, destructiveness, revenge, idleness, cruelty, gluttony, and the like, may all be invested with the character of virtues, instead of self-denial, kindness, and application—if the educator so desire and so plan his association. All which suggests the unspeakable moment of the educator having clear views of the moral character of actions, and an anxious sense of the moral importance of his approbation and disapprobation to the child's character.[1]

13. Habit.—The sentiments which we desire to impress on the

[1] Shirreff on *Intellectual Education*, chap. iii. sect. 1.

child must be cultivated till they shall pass into habits. In the power of habit lies the power of education. By means of habit alone can we fit any one for a sphere of life different from that which he occupies at any moment; but by means of it we can fit him for any subsequent sphere of which the constitution of his being renders him capable. We can accustom him to any direction of activity, and mould his character and temper to any standard. It is in virtue of two features in this power of habit, that we are entitled to look to the efforts of education as having rational certainty of success. The one is the indefinitely great influence which it may acquire. Strong as the instincts of our nature may be—and it is notorious with what force particular appetites or desires show themselves in some cases—we have in habit a weapon with which we may overpower any one; and that not by violence, but by quiet and almost imperceptible measures. Hence the saying that habit is second nature. The other is, that as we are born, not with formed habits, but only with the capacity of habit, it is left to us to begin our habits ourselves. Our character is therefore completely in our own power.

The moral habits which education should foster are habits of *right action*. There is no test of virtue except its exhibition in action; we cannot otherwise be certain of its existence. A right feeling should have its issue in a corresponding action; but it depends altogether on education whether the natural connexion be established between them. When feeling is cut off from action, it is a mere sentiment. In the general case the feeling perishes in the sentiment; for the oftener we speak of right as matter of sentiment alone, the wider becomes the gap between the feeling and the act, and the weaker does the feeling become, *e. g.*, as in the case of pity. There is no education to morality apart from the practice of morality. Children, who are ready to act in obedience to every impulse, should therefore see enacted before them the virtues they are to learn. The society of which they are members should be so constituted and ruled as to give them the opportunity, as far as possible, of carrying out into action the good feelings to which they show a tendency. On the other hand, just as right feelings are strengthened by right acts, feelings of the lower sort must be weakened by removing all stimulants and opportunities to act upon them.

Habit is a power which it is not left to our option to call into existence or not; it is given us to use or abuse, but we cannot prevent its working. Children, with their infinitely varied impulses, and with all their experience to acquire, have an irresistible determination to activity. They cannot be subdued to quiescence and immobility, for we cannot suspend their natural growth; we cannot exclude them from forming habits of action. Whether we are conscious of it or not, we directly stimulate them to form certain habits, if we have intercourse with them at all; for they hear what we say, and they see what we do, and their imitation follows inevitably. The first moment at which there is capacity for action is the moment when we should begin the cultivation of habit; the child is then eager and pliant. With advancing years the disposition becomes more rigid, the sense of doubt and the anticipation of difficulties become stronger, and the whole force of habits which have been allowed to form themselves has to be encountered; so that the task becomes incalulably more arduous. Early habits are at once the most easily formed and the strongest; the habits which are acquired in mature years, often through much self-denial and suffering, never attain the same stability.

To those, again, who have urged that we should not prejudice the child in early years, but leave him alone, so that he may exercise his unbiassed judgment in choosing his course of conduct when he grows up, the answer is clear:—that we should be equally prejudicing him, or, which is the same thing, allowing him to be prejudiced, if we left him alone: we must prejudice him in some way, from the nature of the case; and it is better to prejudice him to what is right than to what is wrong.[1]

14. **The Influence of Single Actions.**—The influence of habit thus invests single actions with an importance far beyond what at first seems due to them. If we were at liberty to view actions by themselves, out of connexion with the past and the future, many which require the gravest remonstrance would appear trifling and unworthy of serious notice. But the tendency to repetition is so strong, and in many circumstances (as we may say) so overpowering, that all who are charged with the education of youth fail in their duty, unless they are extremely vigilant in observing

[1] Butler's *Analogy of Religion*, Part I. chap. v.

even the smallest exhibitions of moral activity. Hence it is that the lie in jest, the thoughtless waste of some little thing which seems of no further use, the unpunctuality of a minute, always demand suspicion, as the threshold over which the child may pass to confirmed untruthfulness, prodigality, or irregularity; and, on the other hand, the small and almost unobserved act of sympathy with his neighbour, the scrupulous attention in removing a spot from his dress or property, and the effort by which he has, with difficulty it may be, conformed to the punctuality required from all, equally call for notice, as possibly the turning-points in his character for benevolence, frugality, or regularity. We can never tell the effects of single actions; it is only prudent therefore to treat them as important. Everything is to be encouraged, of whose salutary tendency we are convinced; nothing is to be permitted, whatever its apparent insignificance, of whose evil tendency we have the slightest suspicion.

15. Time as an Element in Habit.—If we consider the disproportion between the result to be accomplished in education, and the force with which we have to work at any one period, we shall readily perceive how slow and gradual is the growth of the influence of habit. There is a certain analogy between the application of mechanical and of moral force; just as a given mechanical force will attain an apparently impossible result when it is applied during a sufficient time, so will a given moral force if only allowed adequate time to work. From this property of habit, several considerations suggest themselves as to its right regulation. Thus, we are not to expect great results in education in a short time; sudden leaps in character are not according to the law of our constitution, and are therefore to be suspected. Again, if the implanting of any habit is so great a work, we should not attempt to instil too many habits at once. If we have several in view to inculcate, let us select one to establish the power of habit in general; when we have succeeded with that, we shall have given to the child a degree of self-control which will greatly facilitate his acquisition of the others. Again, there is but one way of counteracting any bad habit which the child may have acquired, or of undoing any wrong association he may have formed. As it has not been formed in a day, so it is not to be overthrown in a day. His mind is not now indifferent to the kind of action in-

volved in it ; but finds a certain pleasure in the performance. The single warning or command, therefore, which might have sufficed to prevent its first performance or its first repetition, is now too weak to check the course of action. To increase it in force and severity with the view of doing so, shows an ignorance of the child's nature ; for a pressure cannot be attained to the degree necessary to success, and the attempt will involve a degree of harshness that will shock his moral nature. He must just be led to retrace his steps along the path by which he advanced, watched with care and perseverance by the teacher ; there is no shorter way. It is important therefore for the teacher to make all allowance for the habits which his pupil may have acquired under previous influences. Sudden changes are even more suspicious than sudden leaps. And the labour which he will find necessary to undo a bad habit will doubly repay him, if, in addition to attaining its immediate object, it impress on him the necessity of vigilance to prevent the formation of any other habit, the undoing of which will entail a similar expenditure of labour at some future time.

16. Relation of Intelligence to Moral Education.—The intelligence of the child is not a sufficient basis for his earliest practice of morality. It is mischievous therefore to aim at making him a law to himself, when the very idea of law is beyond his comprehension. If we appeal for the performance of any imposed duty to his own sense of propriety alone, we cannot complain of disappointment. He has but little intelligence, and that little he is not careful to distinguish from humour or caprice ; so that to ground morality upon it is to ground it on the passing feeling of the moment, that is, to give it no solid foundation at all. Morality is in infancy founded on the authority of the parent, acting with the support of habit and association ; what he commands is law ; the virtue of childhood is summed up in obedience.

But this state of weakness does not long continue. By his own experience of life, which is varied and considerable notwithstanding it is acquired on a very contracted scale, by his ordinary daily instruction, and by his intercourse with parents and companions, his intelligence wakes up to activity. He soon comes to judge and to reason, too, after a sort ; and he is moreover conscious of the

fact, as appears by his remarks and questions, often inconveniently shrewd, on what he hears and sees. He likes to have his nascent power acknowledged, and, indeed, he almost extorts its acknowledgment. It is essential to the education of character that we carry his intelligence along with us as soon as it is available, and always to its full reach. We have accordingly to set before him clearly what he is required to do, and the reason of the consequences which we associate with his doing or his not doing : in other words, we have to explain what acts are right, and why they are so. Right and wrong must now be disengaged from their previous identity with external command and prohibition. The idea of law must be dissevered in his mind from that of personal wish on the part of his superior : not till this idea is apprehended does a rational being take his first advance towards a virtuous character. It will not now follow that in training him to obedience we are training him to virtue : he is to obey, not because from his weakness he must obey, but from the feeling that he ought to obey. When intelligence is developed, the demand for absolute obedience may only generate aversion both to ourselves and to what we enjoin, instead of training him to morality.

17. Natural Consequences.—The child's intelligence is first enlisted in the cause of virtue by explaining to him the natural consequences of actions. This may be done with best effect at the moment he has exposed himself to feel them ; for example, if he has been guilty of untruth, we are constrained to suspect and disbelieve him for a time, and this will wound him : if he has acted dishonestly, we are constrained to withdraw from him some little responsibility, and thus show that our confidence in him is shaken : or, if he has uttered naughty words, we may decline his company when next he offers it, and let him feel the uneasiness of isolation. The experience of these consequences will quicken his understanding of the nature of the acts, and it is then that we should point out that our displeasure is exhibited, not from caprice or the sake of giving pain, but from a sense of duty. He can well be made to comprehend the reasons of the course we take, if the explanation be given in a manner suited to his capacity. In a similar way should his attention be directed to the nature of good actions, in connexion with the rewards of confidence and regard which they naturally lead to. But he will learn nothing as to the nature of

right and wrong, if he be simply punished in some artificial way, when he commits the falsehood or the dishonest act, or utters the naughty word: though probably he will be cautious on that account how he offends again. And he will gain as little instruction from finding that his doing of certain things which are commanded leads to his obtaining some artificial reward; though he will doubtless be anxious to repeat them, that he may again obtain the reward which is attached to them. It is through natural consequences that his first intelligence of moral law must be awakened. To awaken the sense of these should be the object of the approbation or disapprobation expressed by him who administers the law; which will thus be felt to carry with them a double weight, viz., that which they derive from the natural relationship subsisting between parent and child, and that which attaches to them as the symbol of the higher reward and punishment inseparably connected with right and wrong. There are very few, if any, of the virtues that may reasonably be expected at his years which may not thus be commended to the child's intelligence.[1]

18. The threefold basis of Morality.—The character of any training to morality is to be measured by the degree in which it unites the several powers of habit, intelligence, and association. Taken singly, these powers do not make up moral training; nay, the exclusive development of any one rather leads away from that result. Thus, moral intelligence is not by itself morality; the one is a quality of mind, the other is a quality of actions. As a matter of experience, we often see the sharpest moral apprehension existing in the same person side by side with immoral conduct. This is not at all surprising, if the essential feature of morality as a quality of actions is overlooked. For by cultivating the mere intelligence of morality, we give the pupil the habit of thinking that that is all that is needed, that his actions are not concerned, and that therefore their character is a thing indifferent; we form in him the habit of not acting at all in obedience to what he believes or knows, which is an immoral habit.

The implanting of habits alone does not constitute training to morality. Habit, without intelligence and conscious motive, is the characteristic, not of a rational being, but of a machine; acts performed under its influence have no moral character, whether

[1] Edgeworth's Essays on *Practical Education*, vol. i. chap. 9.

their results are in accordance with morality or not. In any case this habit of seeming morality cannot be permanent and sufficient as a moral power. The routine conduct to which it leads may go on for a while, as long as the child is kept out of circumstances which might interfere with his obedience to it; but it will never stand against the rush of personal prejudices and interests, when in course of time these clamour, as they inevitably will, for a hearing. There is wanted intelligence to give such acts a moral character, and association to secure their performance against all opposing tendencies.—Finally, we cannot conceive of association alone as constituting a moral training. Apart from habit, the performance of actions must always be difficult, uncertain, and imperfect: whilst it is obvious that intelligence must be at hand to prevent good intentions from leading us, as they often do, astray, and, instead of producing the expected good, entailing much unexpected evil.

Moral education must proceed simultaneously along the three lines we have distinguished: we have to notice how far each of them passes within the domain of the school.

19. Extent and Conditions of School-Influence on Habit.—To cultivate morality, the school must present a wide field for the pupil's activity; and it does so. The school is a little world, in which the pupils devise and carry out schemes as in the world without; in which individual interests are often concurrent, and not seldom in opposition; but where both the concurrence and the opposition give rise to indefinite activity. There is constant opportunity for acting out the virtues of truthfulness, kindness, honesty, and the like, or for being swayed by falsehood, selfishness, and dishonesty. The virtues to be manifested towards superiors are drawn out in the respect and obedience exacted by the teacher, or give place to the opposite vices of insolence and insubordination. In the performance of their duty the moral qualities of diligence and resolution may be steadily fostered; or the opposite vices of idleness and sluggishness; while the routine of the school may be gone through either with punctuality or the reverse. The teacher's duty with respect to this activity is to regulate it and increase it. He sees it to a great extent manifested in the course of engagements conducted by himself or under his superintendence: he can control its defects, and can point the way to such improvement as is practicable. Much of it comes to his knowledge through

report or through casual inquiry. But in great measure it goes on beyond his observation, and in a sphere over which he has no direct control. In the playground we see this activity of the school exercising its greatest influence for good or for evil. If the spirit that presides there is in conformity with his, then its intercourse is for good : if any there retain in their hands a commanding influence over their fellows, but of a different tendency, the activity of the school will run out into bad habits. He can only control it in this sphere by establishing in school a sound public opinion, the reflex of his own, which shall make itself felt everywhere :—a difficult task, and only to be accomplished by him who has the interest of his pupils at heart, and who to that benevolence adds the force of character and tact of management necessary to secure personal ascendency over others. But difficult as it may be, it must be accomplished, if the teacher would have his influence constantly at work on his pupils. Where there is a bad state of feeling in school between teacher and pupils, their activity will be restrained and insincere in his presence ; they will be afraid to act, and so to reveal their sentiments to him whom they distrust. This bad relation will generally carry with it an unsatisfactory relation amongst the pupils themselves : restrained by no central influence, they will be apt to split up according to their several interests into parties having no good will towards each other ; and thus the malevolent dispositions will be stimulated into preponderating activity. The teacher is responsible for establishing confidence between the pupils and himself, and amongst the pupils towards each other, under the genial influence of which the right activity may spring up and gain strength, and the wrong wither away from want of room for its display.

20. Cultivation of the Moral Intelligence.—The school has obviously great facilities for cultivating the moral intelligence of the pupil ; so great, indeed, that it has been tempted to regard what it does in this department as all that it needs to do in training to morality. The error of this idea has already been adverted to ; and, presuming that moral instruction is kept in its own sphere, and burdened with no more than its own responsibility, which is weighty enough, we have to notice the form in which it must be presented to be effectual. Much of the moral instruction, so called, given in school, runs to waste from its want

of adaptation. The children grow weary and restless in listening to abstract discourses on morality. This is not to be set down to their discredit, as if they were averse to practise what is enjoined, or even to hear it inculcated. The reverse is the case; if their love of activity and love of knowledge dispose them to listen to ordinary knowledge when suitably communicated, the same instincts, and their ardent longing for experience in the ways of life, dispose them even more strongly to be interested in rules for its conduct, and to conform their activity to good precept and example, provided only these be suitably set before them. But abstract discourse, being unsuited to their powers and their wants, makes no impression on them. The teacher must instruct by examples, or cases of conduct, which they can apprehend from their own experience. And he must present these in an attractive light, by graphic description and illustration, that the picture may catch their imagination; if this is not done, nothing is done, for it is by their imagination alone that they can hold the picture before their minds to observe it, and feel that it embodies a living truth for them to embrace.

So far as this instruction is given at all in school, it is generally introduced in the religious lesson. In this connexion the highest aspects of morality will certainly suggest themselves for consideration. But moral instruction claims to be treated as a distinctive branch of the school work, chiefly for this reason, that, when it is given only as it is suggested in course of the religious teaching, there is not that wide room for the systematic consideration of the truths of morality in their endless application to the everyday business of life which moral education requires. We see a reason for such a recognition of moral education in the constitution of our nature. We have a moral nature as well as a rational nature, with appropriate means and motives for the cultivation of both. Morality is not identical and interchangeable with religion any more than intelligence is. We should give to both reason and morality, in their inseparable connexion as coordinate elements of our nature, that cultivation which is due to them, and we should bring in the sanction of religion to hallow and strengthen the exercise of both alike. (§ 6.) Morality will be taught to more purpose, with more felt weight, with a wider comprehensiveness, when it is taught in its organic con-

nexion with the intelligence, at the same time that it is commended by the sanctions of religious teaching. So far from being left to take its chance in school, as it commonly is, being enforced in a fragmentary way and at irregular intervals, just as the bible-lesson may suggest it, or as some accident may throw it in the way in course of the reading lesson, it should be systematically provided for. The teacher is very careful in his reading-books to bring forward materials for the exercise of his pupils' mental powers in their natural connexion, and according to their gradually increasing strength. There is the same obligation on him professionally, and a stronger one morally, to provide in the same way for the cultivation of their moral powers. The school can do this, and the school neglects the first duty it owes to society if it does not do this. There is abundance of materials in history, biography, and anecdote, which might be brought together *upon a plan* for the purpose. He is entitled to look for help in this from those who construct school-books; but he is not entirely dependent on his text-books for what he communicates to his pupils. He has ample resources in oral instruction for making good their defects.[1]

21. The 'Positive' Teaching of Morality.—The adult who has experience and judgment to guide him may be taught morality equally by the exhibition of some example of virtue and by the portrait of the corresponding vice. The case is different with the child who has neither: he should be taught by having virtue set before him for his sympathy and imitation. It holds as a rule in mental as well as in moral education, that the learner should be habituated to what is right before he is exercised in judging of what is wrong. Examples of the latter serve excellently to test his knowledge when it has been acquired; but, prior to its acquisition, are as likely to lead him to imitate as to avoid them. First impressions, being so tenacious, should always be of a positive rather than of a negative sort. We ought not to give children a familiarity through instruction with phases of vice which they may not be in the way of seeing committed, and which they have no tendency to commit themselves. This not only unpleasantly lowers their whole tone of feeling by placing them in degrading contact, but will almost certainly tempt them to

[1] Locke's *Thoughts concerning Education*, sects. 81, 82.

commit some of the acts held up to them for avoidance, from the mere spirit of experimenting on novelties of conduct. The best preservative against error is to teach the truth; the best preservative against wrong is to inspire the mind with allegiance to right. We may go over error in all its forms without teaching the truth; we may equally exhibit all the ramifications of wrong without thereby giving the impulse to right. Teaching by negatives, so far as it has any real effect on the character at all, may make the pupil critical of the conduct of others; it will fail to make him virtuous in his own. We may teach him what he should not do, but still he wants a guide to tell him what he should do; whereas if, reversing the process, we teach him what he should do, we teach him at the same time by implication what he should not do.

This process alone is adequate to the necessity of the case. It is not only that prohibitions of the various forms of vice do not in themselves inculcate the spirit of virtue, but they cannot cover the whole conduct of life. There is an indefinite number of ways in which a virtue may be transgressed, all of which we can hardly foresee; if we imbue the pupil with the spirit of the virtue itself, we raise up a barrier against them all; or, if we only lay its foundation, his own experience will gradually build thereon. It is no doubt necessary to guard youth against faults, but we do not need to go far in search of these; the school life will sufficiently suggest those to which we should direct our attention. (§ 23.) And, dealing with such as have actually been committed, and have therefore passed under the pupil's notice, we are sure that we are teaching to purpose, and not running the risk of extending his knowledge of vice in guarding against hypothetical dangers.

22. The Moral Judgment.—The subject-matter of moral instruction does not serve its whole purpose when it has been presented to the imagination of the pupil in an impressive way; this is but the means to an end. From an attentive observation of the circumstances he must be led to exercise his judgment in deciding on the character of the action. The business of the teacher is not to tell him rules of morality, but to make him find them for himself. There is a great difference in practical power between a rule put into the pupil's mind from without, and one

which he has been led to gather for himself. The manner in which he comes by it in the latter case gives it for him a reality and a life which it cannot otherwise have, but without which it will not influence his conduct. There is a doubly sure foundation laid for it; he not only apprehends its scope better, but by the nature of the case he obtains a vivid idea of the consequences involved in its observance. He cannot be too minutely exercised in inferring the rule. He must be led to notice the circumstances which give its precise character to an incident, and how, if any of these were absent or modified, the rule to be inferred would be different. He must give proof of apprehending the rule by suggesting circumstances of his own experience, in which it would find an application. The rule is made of personal force to himself by tracing such analogies.

In this cultivation of the moral faculty, however, we should remember the importance of keeping his experience abreast of his judgment. In educating his mind we can develop his judgment in some directions earlier than in others, and success depends largely on adapting required effort to his ability; so it is in training to morality. He does not apprehend the nature of all the virtues and vices, or all aspects of any virtue or vice, at the same time; and nothing can be worse than to anticipate the experience of later years. The premature teaching of virtues, which cannot be expected to show themselves in his experience till a comparatively late period, is no gain to him, whilst the danger is obvious of our introducing to his notice vices which are beyond his experience, and against which he has therefore no adequate safeguard. Judgments formed under such conditions must be unreal or conventional; they will not furnish him with results which he can take home to himself to regulate his life. The best way to fortify him against the vices of later years is to fortify him thoroughly against such as are incident to his own time of life. In dealing with these we can thoroughly imbue him with a sense of their real character, because we can reach his intelligence and his conscience.[1]

23. School Life as giving Materials for Instruction.—The main differences between the family and the school as places of moral instruction is this: That in the former the parent sees precisely what is wanting to the child's knowledge from having him

[1] Willm's *Education of the People*, chap. iv. sect. 7.

always under his eye and observing his conduct. The family instruction is therefore more spontaneous, and better regulated to the necessities of the case, than that of the school can ever be, for the teacher must in the nature of things proceed less by special requirements at the moment, than by consideration of the general training which the pupil will require to fit him for life. But this comparative disadvantage under which the teacher labours only supplies an additional reason why he should strive, with all the resources of his art, to make the instruction he gives the more impressive; and he is not altogether without compensations.

The more formal moral teaching of the school may to a considerable extent be supplemented by such instruction as is naturally elicited from the incidents of the family circle. There are school cases equally with family cases which the teacher has the means of observing; and, if he observe at all, he will find a greater variety of them than any one family is likely to supply, illustrative both of virtues and vices. His object should be to turn them to the benefit of the school, which has, more or less, been witness of them. If he cannot do this without exposure of individual pupils, he cannot profitably do it at all. If he does it with direct and recognised personal reference, he will be suspected, both by the pupil and by the school, of doing it with personal motives: either with the view of establishing his authority or of gratifying his dislikes. But the judicious teacher will find it by no means impossible to handle cases in an indirect way, so that all his statements shall seem to be made quite incidentally, and indeed to be naturally suggested by the train of his story, so that the allusions shall never be suspected of personal intention. The penetration into their experience which the skilful management of such cases shows, will affect them with a power which no other channel of instruction can attain. Virtues should be illustrated in this way as well as vices: it is in every way desirable that he should show the same insight in dealing with the one as in dealing with the other, and that he should appear zealous and gratified to recognise the good that may be done in school, as well as ready to reprobate the evil. The observant teacher will see from this, how much he will gain in influence as an educator by any intimate acquaintance he may set himself to acquire of the school life.[1]

[1] Abbott's *Teacher*, chap. iv.

24. Compulsion.—If the teacher is to gain the pupils' co-operation at all—as we have already seen he should strive to do—he must present motives for this purpose. This implies the resolution not to place his main reliance on compulsion. Every one soon learns to resist what is urged on him by mere superior power. The child, too, is jealous of his liberty; so much so that he comes to regard with the greatest aversion acts which he is naturally well enough disposed to, when he finds that his liberty is taken away. Where compulsion is employed, it is not effected by words alone. Since resistance is certain to arise, measures must be taken to overcome it; hence punishment becomes supreme as the means of school-influence, and fear the supreme motive in the pupil's mind. The use of compulsion alone or mainly is a contradiction, because the co-operation which it excludes is the only guarantee for diligence and good conduct which the teacher can have. When fear is allowed to possess the pupil, it will tolerate no other motive, unless, indeed, it be hatred, and the only half-hidden hope of successful resistance. It banishes utterly that confidence and repose on which alone the pupil can listen to the claims of duty, and makes him solicitous only about the means of escape from the dangers which he apprehends to threaten him. Distrustful, and justly so, of the legitimate means for this purpose, he is driven upon cunning, deceit, and falsehood, the natural weapons with which both children and men seek to protect themselves under a government of terror. Whatever work is attained under the pressure of this stimulant is attained at a terrible sacrifice, and with the prospect of a terrible reaction when the day of freedom comes. And whatever the amount of intellectual work he thus extorted, that of moral activity is absolutely nothing. There may be secured an outward conformity, but virtue does not lie in appearances. The strongest restraints on outward activity are quite compatible with the greatest internal activity of wayward inclination. The character nurtured under the influence of fear is doubly bad; it will have been alienated from virtue in general, and will be stained with vices springing up directly from the discipline to which it has been subjected.

If, on the contrary, we recognise the measure of freedom that naturally belongs to children, we may bend them to our will more

thoroughly than by the strongest compulsion; we may make them desire what we desire, whilst they are at the same time acting as if to please themselves, an end which we cannot attain so long as we regard compulsion as other than a subordinate and supplementary means of influence. To enable them to control their free will is the end of education, and neither to eradicate nor to subdue it.

25. **Motives to be Cultivated.**—The first motive which animates the child is the desire to obtain the *approbation* of his parents, towards whom he feels so strong and intimate an attachment, and on whom he so entirely depends. This desire of approbation continues a permanent feeling, and may be transferred so as to act towards any superior. The teacher who has the art to use it well will find it the most powerful, as it is the best, of the subordinate motives at his disposal; he can inspire the pupil with a strong sense of gratitude to him for benefits received, of dependence on him for guidance and enlightenment, and of reverence for his superior wisdom. The force of the motive is in exact proportion to the degree in which he can excite these feelings, and is independent of the pupil's advancement.—The *example* of a superior, though strictly only a means of instruction, carries with it so peculiar force that we may regard it as a distinct motive. Setting forth his desires in so palpable a form, it appeals to the instinct of imitation, which is strong in the child's nature, and which operates in every department of activity, intellectual and physical as well as moral. Its energy is to be accounted for in two ways: on the one hand, by the distinctness of the model held forth and the greater impression it makes on the mind than one exhibited merely in description, and by the guarantee which it is felt to afford to the sincerity of the oral teaching; and, on the other, by the child's solicitude to obtain that experience of things and that influence which he imagines his superiors to have, and which he connects with what they *do*. The weight attaching to the example of the teacher should be second only to that which belongs to the example of the parent.—Another motive which resembles the preceding in its nature, and which is at the disposal of the teacher even more than of the parent, is the influence of *school-opinion*. This motive is not one of necessary existence, however; where the school is not in good condition, it will

have no public opinion, or a perverted one. The teacher must create it by his own character and discipline. Where he has succeeded in establishing a healthy opinion in school, he will find appeal to it a motive of very great power; for all are sensitive to the opinion which the world forms of them—the child equally so with the man—and will do anything to prevent themselves from being cut off from the sympathy and company of those with whom they have pleasure in associating.—Another motive which the teacher will find capable of producing great results is the *desire of distinction*, which differs from the preceding in this, that it is not content with approbation in the abstract, but aims at excelling others associated with us in the same work. The existence of such a motive seems inseparable from the very constitution of the school. Of the power of this motive, experience does not allow us to doubt; its character, however, will depend on the way in which it is stimulated. If it be not kept under control, it may degenerate into personal dislike and envy; it must therefore not be left to act on chance, but taken in hand and regulated. Generally speaking, it is appealed to in a very one-sided way, viz., to encourage intellectual action; it should be regarded as having equal power for the production of moral results.—Our object being to connect happiness with the doing of what is right, there remains another still more palpable mode of establishing the connexion, to wit, by the conferring of *rewards*. That nature herself provides rewards for virtuous conduct has already been noticed, and also that it is proper to make the child experience these as much as possible. We contemplate here artificial rewards, gifts or privileges of some sort, by which we may hope to impress still more strongly on him the tendency of good conduct. Obviously there is room for the exercise of a legitimate influence through this association. Obviously, too, as in the case of the motive last named, there is room for great abuse in working with it; its character, therefore, will depend on how it is used. From its nature, it may be largely appealed to, and is, in fact, largely relied on, in the work of the school. The virtues which may be cultivated through intellectual work may be more powerfully and correctly stimulated by it than the others, such as diligence, regularity, and perseverance; more powerfully, because they are in more constant demand, and their results are more easily and

certainly estimated; more correctly, because the natural consequences of them are more largely experienced in the intercourse between teacher and pupil.—The pursuit of knowledge has a motive peculiar to itself; where well conducted, it gives much pleasure to the learner, from the way in which it satisfies his *curiosity* and *love of activity*. These instincts lead to their own reward; the gratification of them should therefore be a very prominent motive in cultivating the virtues in question, as being that from which in the highest degree the pupil's co-operation is to be obtained towards his own advancement.—Such are the motives by which the child is to be urged to virtuous conduct. That they will be uniformly sufficient for the end in view cannot be asserted. Taking into account personal peculiarities of constitution, the liability of children to temptation, with their weakness to resist it, and their characteristic volatility and variability of humour, they require to feel that the authority set over them has restraints, not less than persuasives, of indefinite force. We have already shown that mere repressive measures are not to be relied on exclusively, and that they not only do not constitute, but that they tend to destroy, motive; but still they have their own place in education, subordinate to instruction and persuasion. We must therefore add to the list of motives which the teacher must use, the enforcement of his own will in a certain measure, or *compulsion;* the fear of punishment must come in to steady and support the hope of reward.

The application of all these motives, depending, as they do, for their moral character and effect on the manner in which they are employed, forms a distinct part of our subject, and will be treated in the chapter on Discipline. (Part ii. chap. 2.)

26. The Regulation of Motives in general.—There are some important cautions to be borne in mind in presenting motives. First of all, as they are of different kinds, so some are applicable at one stage of advancement, and others at another. Some, like the love of approbation, are proper at all times; some, like the desire of reward, are proper at an early period, but are both less proper and less powerful at a later; whilst the highest motive of all, the motive founded on a conviction of the natural consequences of actions, which is weak in youth, should grow in strength with advancing years and training. This gradation in

kind amongst motives must be studied in order to their right use.

But we must likewise graduate them in degree, with the view of economizing their power. A great stimulus may sometimes be needed, as, for instance, at that critical point at which a certain habit is either to be begun or to be renounced; when the point is gained, the stimulus should be lowered. If we accustom the child only to act under keen excitements, he will soon cease to act without them; but we cannot keep up a series of these, and he will not meet with them in the ordinary course of life. The most ludicrous disproportion of motive is often presented by parents; the result being that, though the immediate object is attained, the power of the motive to secure continued activity is so much weakened. The teacher is under less temptation to let his affection thus overbalance his judgment; but he, too, needs to be reminded, that with how much less of artificial stimulus he can attain his object, the better is the prospect for his pupil's character as regards the particular habit in view, whilst his own resources remain the greater for future occasions.

It is not so much susceptibility to any one motive that is part of the child's constitution, as capability of motive in general. The sense of special motives requires itself to be cultivated as much as the ulterior objects for which these are designed. Motive of some kind will always be at work; if we do not present proper ones, the child will grow up to those which are improper. He cannot help forming associations, but, without cultivation, they will necessarily be low. If, then, we wish him to be influenced by our approbation or by the good opinion of his fellows, to cherish any honourable desire of distinction, or to be animated by the love of knowledge, we must train him to feel the reality of the pleasure which gives to such motives their influence. In establishing motives, the teacher will not only gain certain results in conduct at the moment, but will imbue the pupil with that which shall always afterwards influence him to the exhibition of similar conduct. It is a much higher achievement to implant a power, either mental or moral, than to obtain a temporary result.

27. Influence of the Teacher's Character.—Habit, association, and intelligence are effectual as the threefold means of educating the child to virtue, only when employed by one who exhibits

in his own life the virtue which he would inculcate upon others. Without inspiration from this living source, habit is but an objectless routine; intelligence will issue neither in virtuous desires nor actions, and the association of happiness with right conduct is a pretence. The whole of moral education is a mere form unless guaranteed by the moral character of him who conducts it. The ground-principle of moral training is sympathy with right, as manifested by those on whom we depend, and to whom we are bound by the ties of love. In this way the parent educates; in this way, too, must the teacher. Nature provides these conditions of education for the parent, however, whilst the teacher has the benefit of them only in so far as he cultivates them for himself. It is in his power to do this to an extent amply sufficient for his purpose. By his interest in his pupils he can make them feel that he has their welfare at heart, and this will give him their love. The feeling of dependence is natural to them, and, by prudent management, he can indefinitely increase the influence natural to his position. Both these elements are necessary: power is not enough without love, for, from its nature, sympathy can be attracted only, and not compelled; love is not enough without power, for the volatile nature of the child will be continually going astray, and therefore needing restraint and pressure. Thus we have come to this ultimate fact in moral education, that it is the teacher's character which determines the character of the school; not what he does, so much as what he is. The maxim is a true one, "As is the teacher, so is the school." Seeing, then, that the teacher's character is the most precious possession of the school, he should never forget his self-education in conducting the education of his pupils; for the higher he raises his own character, and the greater the ascendency with which he invests it, the higher will he naturally raise the moral tone of the school, and the more will he increase his power of making it respected. There is probably no single point in the whole science of education that deserves to be commended to the teacher's daily reflection more than the organic connexion that should exist between the means he has to work with and his own personal character.

28. The Sense of Duty as a Motive.—The highest end of moral education is to lead us to do what is right for its own sake, in other words, to establish the sense of duty. All the

other motives are but props to support this, and they are used well or ill according as they are used to promote or to prevent its growth. They all continue to act through life, and their action is often most opportune and valuable; for we cannot approach moral perfection so nearly as to be able to act uniformly from the highest motive, even when we feel its power. Nevertheless, the sense of duty may become our ruling motive, keeping the others in check when sometimes their improper action would lead us astray, and prompting our conduct in cases where they often remain inactive. The degree in which we possess it must be held as the measure of our character: the true dignity of our nature lies in following it, and the happiness which flows from the recognition of it is the highest of which we are susceptible.

The distinguishing element in this motive, that which gives it its dignity, is the self-control which it involves. When the sense of duty fails, it is not always from lack of intelligence, whether in the case of men or of children; we have more frequently occasion to ascribe the failure to deficiency of self-control. It comes to this, then, that our success in training the child depends on the degree of self-control to which we bring him up. He is volatile, beset with passing whims, liable to be led away easily by temptation; we must teach him resistance. He has instincts and passions given for good ends, but not themselves self-acting towards these ends: not given him to indulge, so that he may plead their mere existence as a plea for his abuse of them, nor yet to be treated as if they were his enemies and therefore required to be uprooted, but to be regulated; running out into every vice when indulged without consideration or reason, leading to the exhibition of all personal and social virtues when guided by reason. In obtaining this mastery of himself lies his trial: "He that has not a mastery over his inclinations; he that knows not how to resist the importunity of present pleasure or pain, for the sake of what reason tells him is fit to be done, wants the true principle of virtue and industry, and is in danger never to be good for anything." . . . "The having desires accommodated to the apprehensions and relish of the several ages of life is not the fault, but the not having them subject to the rules and restraints of reason. The difference lies not in having, or in not having, appetites, but in the power to govern and deny ourselves in them."[1]

[1] Locke's *Thoughts concerning Education*, sects. 36-45.

29. Cultivation of this Motive.—The first requisite to the cultivation of this motive is to comprehend the mode of its development, so that we know how and when it should acquire strength. There are two mistakes equally common: because it is the highest motive, we may act as if we relied on it from the very beginning; or, conscious of its late development, we may work with the other motives, as finding them sufficient for our immediate purpose, and neglect to appeal to it when the time comes for doing so. The sense of duty is a motive for the adult. We cannot hope adequately to influence children by it alone; if we make the attempt the result will be frequent failure, whilst we shall incur the worse danger of fostering in him the notion that he is capable of self-direction, and shall thus shut his eyes to the fact of which he should be made quite conscious, that his nature is yet in an imperfect stage, and that he has much to learn and much to do before we can credit him with the manly character. On the contrary, we are not to ignore such convictions of duty as he has, and to subject him to the rule of blind unreasoning obedience. These are two extremes of discipline between which we must steer a middle path. The child has only the germ of this motive: whilst he remains a child, we must therefore call in the aid of the other inferior motives in which his sensuous undeveloped nature feels more force; but whilst we rule him as a child, we are to do so under the remembrance that he is to become a man, and should be acquiring the motives proper to manhood. This motive is to be recognised from the first, but not from the first relied on: to be appealed to steadily according to its strength, and to be presented wherever it seems sufficient for the occasion: to be gradually recognised more and more, till it shall come in maturer years to be felt as the leading motive. We must both obtain certain immediate results from the pupil, and enable him afterwards to obtain similar results of conduct for himself.

If we commit the first of these two errors, we shall have no solid influence over the pupil ourselves; if the second, we shall not fit him for exercising influence over himself when the time comes, as it must come, for him to do so.

30. Early Obedience the Foundation of Self-Control.—Self-control being the regulation of our instincts and desires by other

considerations than impulse, the first step in the child's progress to it is the learning of obedience ; for the absolute will of another is the only standard of duty which at first he can apprehend or feel binding. The parent often humours him under the notion that the object of desire is trifling, or that the consequence of granting or of not granting it will never be felt in the long-run, or with the idea that the child is really not a subject at all for moral government in these early years ; and it may be he proposes to himself to attend to this matter of self-control, when his child shall have got more intelligence to know what this virtue is. A fatal mistake : for by this indulgence he teaches that natural freedom consists in license to follow impulse, and he will seem tyrannical when he comes to attempt restraint in maturer years. Thus he will have to encounter the opposition both of the child's love of freedom and the force of habit, which are likely to prove too strong for him. The proper theory of government is the reverse of this ; there should be the exercise of absolute and undisputed authority in childhood, with a view to its relaxation in favour of moral suasion in youth : obedience should prepare the way for freedom.

The two defects recognisable in the action of the will are irresolution and wilfulness. The former is not, generally speaking, a fault of childhood, from the very fact of its impulsive character, but rather a fault of maturer years : the latter is the fault of childhood, being the subjection of the will to impulse. Wilfulness seems sometimes to be regarded as a virtue, and the fear is expressed that in checking it we shall weaken the will, whereas what we seek to weaken, and ought to weaken, is not the will, but the impulse that overrules the will to its misdirection. Since the child is not strong enough in himself to resist the impulse, he must have a barrier for that purpose in the imposition of the will of another. But in aiming at obedience, we should not strive to break down the child's natural elasticity of will : this is not to educate the will, but to bring him up to the other extreme of defective character, to wit, feebleness of will or irresolution.

31. The Element of Freedom in Self-Control.—The opposite error in government from that of giving license to childhood, is that of continuing to exact absolute obedience when the period for

such obedience is past. The parent or teacher thinks it easier to govern in this way than by gaining the child's co-operation; and, if he have much vigour of character himself, perhaps it is so. But what does it gain? There is, in the first place, the risk of its failure: it is possible that the child too may have that vigour of character which refuses to allow its natural love of freedom to be subdued; in which case it will be distorted into the channel of obstinacy, rebellion, and practical disbelief in all moral authority whatsoever. Perhaps this is the general case; but supposing that the aim of such government is attained, there is little ground for congratulation. The teacher has proved that he can govern the child, and train up a youth fit to be governed by others; but, by breaking down the child's self-reliance, and refusing to initiate him into the practice of self-government, he has utterly unfitted him to govern himself: and he sends out into the world a youth capable neither of forming nor of executing one steady purpose, with no resource of reason or fortitude to resist obstacles, and too weak to bear the smallest responsibility that may be thrown upon him. Thus it is one thing to make an agreeable and tractable pupil, and another to form his character. Since the period of freedom must come, the educator should not look on it as an infringement of his prerogative, but as a thing natural, right, and desirable, for which accordingly he should be prepared. He should not think that he rules the child in childhood merely for the sake of his obedience; nor should he give the child the impression that he rules merely for the love of rule, but because the feeble and inexperienced condition of childhood requires rule; he should feel no less satisfaction in the advent of this period than the child himself. Otherwise there will come a struggle; and the youth who gains the victory, as gain it he often will, will consider the result as a triumph, and will speedily look elsewhere for the laws of his conduct. All this is matter of experience. The great cause of failure in the education of the character is the presence of passion, unreasonable desire of personal power, or the want of self-control on the part of those who profess to conduct it.

32. **The Child's Training to Freedom.**—We introduce the child into his state of freedom, when we make him understand the principles that should regulate his own actions, and desire to re-

cognise them. When his intelligence awakes, we should accordingly explain to him why we require him to act in such and such a way, and invite his co-operation. He will acknowledge the reason and the right of such appeals, for he has the germ of the sense of duty within him, and he will feel grateful to us for elevating him by the recognition of his rational nature. This process of explanation requires to be carried on as long as he has anything of morality to learn; for the rest, we must look to our government.

When we have recognised his freedom, we should be careful to give it room and encouragement to act. Hence we should not intrude the lower motive of compulsion, or even of command, into the circle within which we have made up our minds that the child can act rightly of himself: we should not exact from an inferior motive, what we can secure from a higher. Nothing lowers the tone of conduct more than for the child to be obliged to give what he is quite willing from his own conviction to render. Such a course may be required on some emergencies, but it cannot be as a rule. On the other hand, we must gradually widen the circle of the child's freedom. We do this by ceasing to watch him perpetually, as if he were unfit to take care of himself; by refraining from over-minute legislation, which implies that he is not in possession of any principle of conduct, or, at least, of any power of applying it to particular cases; by ceasing to descend into minutiæ of explanation on points already comprehended by him, and lying within his own power of self-regulation; by placing him in circumstances which imply increased responsibility, and which task his moral judgment, his resources, and his firmness; and, generally, by making him feel that we expect better things from him, than from a mere child. All this is to be done, of course, under the recollection that we are not dealing with a completely educated character, but are only in the act of forming one; to be done, therefore, very gradually and discriminately, and with the liberty of falling back on other motives, when the pupil forgets the trust reposed in him.

In thus recognising the power of the pupil to act from sense of duty, we have to guard against an error of procedure incident to the teacher, and a possible error of consequence on the part of the pupil. We fall into the first error, if, in our anxiety to exercise

the sense of duty, we strain it. This we may do either by capriciously requiring the pupil to do what we have not explained to him, and what we cannot fairly expect him to do without such explanation; we also do it by simply over-estimating the degree of strength which this motive has attained, and expecting from it results which it is as yet inadequate to produce. As when, for instance, we compel him to an act of generosity in parting with something he values, before we have sufficiently associated in his mind such an act with the pleasure which naturally belongs to it, or when we place him in such a position that he can only tell the truth by the wounding of his own self-esteem. Failure in effort should be excluded as much as possible, particularly where it offends the conscience; hence, in all exactions, we should endeavour to accurately estimate the degree of moral force to which the pupil has attained. The other error to be guarded against is the fostering, under the shadow of self-control, of certain excrescences which are apt to grow out from it in children, when first placed in a position of power and trust, to wit, forwardness, arrogance, inconsiderateness, and the like. These vices are much more likely to show themselves as a natural reaction when the child is not educated to self-control, than to accompany the process of education thereto; still, it is true that when responsibility is devolved on him, it is due both to his inexperience and to his success in the trial, carefully to watch how he discharges himself of it, since he cannot be expected to distinguish clearly the elements of conduct which are necessary to his success from those which are not.[1]

33. Influence of School-Life on Character.—School education does not suffice to establish the sense of duty in all its strength, any more than it gives the full development of mental or moral power; it is reserved for the self-education of experience to consolidate the work of training which the school has begun and so far carried on. But the school can lay the foundation of this motive with the same certainty that it can lay the foundation of a good memory, or a good reasoning power; provided only all the departments of its work be conducted harmoniously, as they ought to be, with this end in view. The two grand conditions are, that there shall be a consciousness of pur-

[1] Shirreff on *Intellectual Education*, chap. iii. sect. 2, and chap. vi. sect. 3.

pose throughout them all, and that this purpose shall be kept steadily before the school. Thus, in the department of *conduct*, the requirements of morality are explained to the pupil, so that he recognises their propriety, and undertakes to act up to them from this conviction; they are then accepted as laws of the school, and violation of them punished, not arbitrarily, but always with reference to the acknowledged position they have obtained in the pupil's own conscience. In the matter of *school regulations*, which refer to a department of conduct peculiar to the school, though the statutes themselves are not of necessary or moral obligation, yet, in the circumstances, their observance is treated as having a moral aspect: the comfort and the progress of all require that observance, and so they are enforced as a rule of duty. Regulation and penalty can never be divested of their moral bearing on character. In the conduct of *instruction*, a daily round of work is prescribed and exacted, and with such steadiness that the preparation comes to be felt by the pupil as a condition of life; he feels himself in the grasp of a law which he cannot avoid, and which, under proper guidance, he has no desire to avoid. As he grows up, this ceases to be *simply required* of him by a superior power; it is treated as a matter of duty, and is required from him under a sense of duty. He is led to perceive that he has talents and opportunities of improvement, and future duties to discharge, which he must now respectively use and prepare for, not by uncalled-for lectures, but by the word in season, for which the observant teacher will be at no loss to find a place; and he is taught that preparation for usefulness in the sphere he will afterwards occupy is a duty to himself and to others, and, above all, to God, who has given him all his gifts and exacts their faithful use. Then, besides the steadiness with which a certain line of conduct is required from him in all these departments, we may hope that he has before him, in them all, an *example* of the qualities which are enjoined on him, in obedience to the same motives which he is urged to cherish.

Thus it is that in the school life he feels everywhere a power drawing him steadily in one direction; a power acting under one uniform purpose and in obedience to an understood law, from which he both imbibes the impression of purpose and law, and has the whole machinery of his nature accustomed in its opera-

tions to give effect to them. But we repeat that this conviction of moral necessity, in other words, this sense of duty, grows up under conditions which do not come, and are not kept up in a school, as matter of course or by accident, but by design, vigilance, and self-control on the part of him who has it in charge.

34. Obstacles to Success.—We have had occasion to see that the school cannot fairly be charged with the exclusive responsibility of moral training, because it has not the entire supervision of the pupil. It receives him only when he has advanced a certain length in his education within the family, and, when it does receive him, it is only for the smaller part of his time. Its success is therefore much dependent on the nature of the influences exercised on him at home before and after it receives him. Often its principal work is to eradicate false ideas and undo bad habits. The most prominent of these deserve attention, as they are often serious obstacles to the teacher's success. Leaving out of account here the supposition of the child's moral education having been expressly perverted at home, or even neglected, and considering only those cases where there has been the intention to promote it—(1.) We may notice, in the first place, the influence of wrong associations, by which virtue has been associated with some factitious and perhaps sensuous reward, and vice with some equally factitious punishment. When the child finds out that the reward or the punishment he has been taught to look for have either no existence in actual life at all, or at least not in the connexion in which he looks for them, his whole theory of consequences falls to the ground; and with his scepticism as to consequences there may arise a scepticism as to the obligation of virtue. Parents and those who have charge of children are often tempted to hold out any reward or punishment which may promise to be attended with the strongest immediate effect, utterly unconscious of the bad effect such a course must have on his character. It is difficult to disabuse the mind of a child of such early prejudices; the only course open to the teacher is to renounce all false associations, and to dwell on the natural consequences of actions in the new association he strives to establish in their minds.—(2.) The false reasons which are so often presented to the child for the conduct required of him, beget suspicion of the motives of those who are over him when he finds out the imposition, and consequently of

the precepts which they enjoin. This mistake is sometimes committed by parents deliberately, sometimes hastily and under impulse; in either case they regard the performance of some act by the child more than the spirit in which the act is performed, which ought to be the main consideration. Let the teacher, at all events, be strictly truthful and ingenuous in dealing with his pupils, giving them true reasons when circumstances admit, and when they do not, telling them that they will understand the reason in course of time, though meanwhile they must act upon his authority. If he acts otherwise, he will certainly destroy his character for truthfulness, and weaken their belief in the obligation of morality in general.—(3.) Another obstacle to the teacher's moral influence is one or other of the various bad tempers developed in children by the correspondingly various forms of bad government. Thus the child may be systematically humoured at home, his own inclinations being taken as his only law; this is an education leading away from self-control: or, if law is recognised at home, his observance is perhaps secured by coaxing, and thus he forms the notion that obedience is not a duty which he owes, but a favour which he confers, and which of course he may withhold at his pleasure: or he may be driven along under a regimen of stern compulsion which excludes all notion of law from his mind, except that which is measured by the physical power of his superior; if he do apprehend a law under such guidance, he can only note it as the cause of his misfortunes: or, finally, he may be subjected to both coaxing and compulsion, and the result is that the arbitrary severity and the arbitrary leniency eradicate all idea of law except such as he may find in the caprice of his educator, and on this he cannot calculate, so that it is no law at all. The necessity of discriminating the child's character, and the influences which have formed it, must be apparent; without this there can be no certain adaptation of discipline to his requirements.

CHAPTER III.

OBJECTS OF MORAL EDUCATION.

35. **Truthfulness.**—Truthfulness is that habit of character by which men believe that what we appear to think, say, or do, is what we really think, say, or do. The child has neither the strength of mind nor the experience necessary to comprehend the importance of this virtue; and hence his allegiance to it is of a very hesitating and uncertain kind at first. Nevertheless he has a feeling of its propriety; he shows this in his countenance when he is detected in the act of violating it, and he uniformly resents the violation of it towards himself.

Truthfulness is violated in other ways than by direct and deliberate mis-statement; for example, by the practice of making *excuses* for faults in conduct which do not fairly admit of them; by *exaggeration*, which from carelessness or vanity overstates the case; by *equivocation*, in which the words may be true, but the impression intended to be conveyed by them is false; by *dissimulation*, which by silence or some assumed attitude allows a false impression of our position to go abroad; by the *breaking of promises*, whether from inability to fulfil a promise rashly made, or from neglect to fulfil one to which we have the power of giving effect; and by *falsehood in act*, such as is exemplified largely in schools in 'copying' a neighbour's exercise, or 'prompting' his answers. To inspire even a moderate love of this virtue, it is necessary to set the highest idea of it before the child; the teacher must therefore be on the alert to check all its violations. It may be added that he should never treat otherwise than seriously anything like jesting or trifling with the truth. Young children sometimes lie for mere amusement, with no intention of deceiving, and with no intention of standing to their falsehood; whilst he cannot treat a fault attributable to inexperience as if it proceeded from moral delinquency, he must treat it with sufficient seriousness to prevent its repetition.

36. **Motives to this Virtue.**—In seeking to promote the love of truth in his school, his first business is to ascertain that there is nothing in his discipline and general treatment of the pupils

which tends to lead them away from this virtue. Of course no teacher ever intends this result by his measures; but it is matter of experience that a great part of the lying in schools is often directly caused by these. Undue severity is the most fertile in its consequences; the fear which it begets instinctively flies to falsehood for protection from danger which it cannot otherwise hope to escape from. Next to fear we may reckon vanity as a stimulant to falsehood; and hence the inexpediency of whetting the love of distinction amongst the pupils too keenly by the manner of bestowing praise or other reward. The moral tone of the school is never out of danger when any exhibition of cleverness is valued, or appears to be valued, more than truthfulness. Connected with this is the thoughtless straining of this virtue in the child, which has already been referred to. When he is asked in presence of his class whether he duly performs some duty of which he acknowledges the obligation, such as prayer, charity, or any other, his self-esteem is brought into conflict with his love of truth, and, from its nature, generally triumphs; the child should not be exposed to these temptations, well-intentioned as they are.

Much will depend on the associations which the teacher connects with truth and falsehood. For truthfulness, he need give no reward but the bestowal of his confidence; he lowers the character of this virtue, and, moreover, places the practice of it on a very insecure basis, by attaching any sensuous or external reward to it. He should by his manner show that he expects truth from them as a matter of course. He should not show that he suspects any of disregarding it. There can be no medium between truth and falsehood, and to continue a suspicious intercourse with those whom he regards as tainted with falsehood, is virtually to tolerate the vice, and so to accustom the school to a low reputation for truthfulness. There must be no half-measures in inculcating truth: so, where there is no proof of falsehood, no suspicion must be shown, but, where there is, there must be no compromise. When a pupil is convicted of falsehood, the teacher should, in the first instance, express the surprise and pain which it causes him, as a thing which brings disgrace upon the offender, and even on the school. Then it is not to be passed as an ordinary fault; he must show the distrust which has arisen on his mind towards the offender, by not receiving his word again without confirmation, and by not turning

to him for the routine information he asks of his pupils. The religious motives which should be appealed to in inculcating this and other virtues, will be insisted on particularly in their own place. (§ 57.) This confidence should not be restored, on the mere appearance of penitence, but made the reward of some degree of steadfastness to truth, as proved by subsequent conduct. At the same time, while the pupil's character is suspended, the teacher must not lead him to think that he has forfeited his good name permanently; without the stimulus of hope, there will be no effort towards its recovery. If this gentle treatment have no effect, as it is not likely to have on any who have been hardened by habit, there must be recourse to severer measures of punishment.

While the teacher attaches the reward of his confidence to truthfulness in general, he should be especially tender towards confession. Not that this must always be allowed to rid the pupil of the inconvenience of his faulty conduct, whatever it may be; but the teacher should by decided commendation reward the ingenuousness which prompts the confession. We assume that he exercises the necessary discrimination to ascertain that it is sincere; for, if he be too facile, many of the pupils will have penetration enough to see this, and to compound by mock confession for the consequences to which they have exposed themselves. This matter of confession is an important one to handle rightly, from the moral courage which it tends to foster along with truthfulness. Probably it would be a less uncommon thing than it is in school, if the teacher were always careful to impress his pupils with the conviction that they have nothing to fear from confessing their faults to him.

A child will never acquire a stronger love for the virtue of truthfulness than he feels to be shown in the character of those about him. The teacher should therefore be strictly truthful in all his own statements and representations; fulfil his promises to the letter; be careful how he give rise to expectations, and gratify those which he has suggested; never jest with the truth, even in the very slightest degree, and much less attempt to practise on the pupil's credulity with improbable stories. He should moreover be honest in the reasons he gives his pupil, when he gives reasons at all, and not indulge in assumptions either of knowledge or of insight into character, which he knows he cannot make good; for the pretence will be disco-

vered, and will destroy the pupil's confidence in him. In short, he should deal with the pupil in this virtue of truth, just as he deals with his friend; refraining from all liberties with equal scrupulousness.

It is not necessary with younger children to go into the grounds on which this virtue is so much esteemed; they feel that it is right, and require no demonstration to that effect; but it will be proper, in the moral cultivation of advanced pupils, to point out those considerations of personal and social wellbeing which constitute its obligation.

37. Tale-Telling.—The difference between truthfulness and tale-telling should be made clear to the school. A pupil ought to state courageously all that he knows of any matter when he is challenged, for the maintenance of his own integrity is his highest duty; but he may not volunteer to report all that he sees, or thinks he sees, amiss in his neighbour's conduct. When the practice of tale-telling prevails, it utterly excludes those feelings of natural confidence between pupil and teacher, which all school morality involves. It is injurious to the tale-teller himself, for it inevitably leads him to constitute himself a censor over others, and turns away his scrutiny from what most needs it, to wit, his own conduct; whilst, granting that it often originates with no bad intention, but from a supposed sense of duty, it cannot be persevered in without imminent risk to his character in respect of that truthfulness which may have first prompted it, and without fostering in him an uncharitable spirit. It is injurious to the pupil who is informed on: wounded by the ungenerousness and unfairness of the act, he is tempted to harbour a feeling of resentment towards both the informer and the teacher, and is but little disposed to listen to the consequent admonition, much less to profit by the punishment, which may result. It is injurious to the teacher: it is incompatible with a generous discipline, and cannot fail to lose him the regard of his pupils. There will be special occasions on which he may fairly ask the assistance of his pupils to aid him in putting down a particular vice by reporting any instance of it which they may see, and in which they are bound by their own honour to give him such aid; but the habit of indiscriminate reporting must be discouraged by him in every way, both by private admonition and by indirect public instruction. Nor can it be necessary to him; he will find sufficient materials to guide his discipline in the faults which he

notices himself, and those which are brought incidentally under his observation.

38. **Justice.**—Justice is the rendering to every one his due. It has various applications according to the nature of the interest involved: we may view it here in two leading aspects—(1.) As meaning a strict regard to the right of property in others, in which sense we call it *Honesty;* and (2.) As denoting a strict regard to their character, in which sense it bears the name of *Candour.* The child stands in the same position towards this virtue of justice as he does to truthfulness. Neither from his reason nor his experience can he at first comprehend its obligation; whilst his self-love prompts him to be very indiscriminating in gratifying his desire of possessing. Still, his countenance betrays a sense of wrong when he is detected in the act of appropriation; and he never hesitates as to its moral character when practised against himself.

Dishonesty is not only a vice but a crime, and as such punishable by the laws of society. The pupil should therefore not be left in the slightest doubt as to what acts render him liable to the charge. Honesty is violated, not simply when he lays hold openly on what belongs to others, but in many other ways; for example, when he does the deed under the shelter of a secrecy which seems to exclude the chance of detection; when he takes anything under what he knows to be its value; when he injures, through carelessness, what he may have borrowed; when he keeps possession of something he has found, without any effort to discover the owner. He should also be made to understand that dishonesty loses none of its character because the thing in question may be of trifling value, or because it belongs to the school instead of belonging to a neighbour, or because custom may have sanctioned such and such frauds as harmless. And the value of the outward act must be shown to lie in the inward spirit; honesty is never satisfied as long as there exists in him one envious thought of his neighbour for anything that is his.

39. **The Means of Promoting it.**—When children are conscious of the obligation of this virtue, the teacher must show in his whole manner of dealing that he expects them to exhibit it in their dealings with each other; he should not fix suspicion on any, but wait for proof, and then take decided measures, just as in in-

culcating truthfulness; and he should express plainly the surprise and pain which he feels, when he learns that any one has transgressed. The confidence he has hitherto accorded to the offender must be suspended, and distrust take its place; a relation which should continue till the pupil has proved by his subsequent conduct that he has risen from his fall. Deliberate breach of honesty must be punished by severer measures. The delivering up of found property is an exhibition of virtue analogous to that of confession in its influence on truthfulness; the teacher should be careful to commend it, as it involves a greater exercise of self-denial than accompanies the ordinary observance of honesty. There is not much room for the influence of his example in dealing with this virtue; he can exercise it only in being careful, in the case of found property, to make search for the owner, and never, in any circumstances, to appropriate to himself what a pupil has delivered up to him as having been found. In all his efforts, the teacher should not aim at merely getting the property restored which may have been abstracted; it is the spirit of honesty he wishes to inculcate, and the outward act by itself is no guarantee that the spirit is there. It is therefore most injudicious simply to use violence or coaxing to induce a pupil to restore to its owner something he has taken from him or found. This virtue is much influenced by other virtues: all that the teacher does to promote a spirit of contentment and liberality will go to confirm his pupils in their love of honesty and hatred of covetousness. The nature of property cannot be made clear to the youngest children; but not very much experience is needed to open the mind so as to comprehend this, and the teacher should appeal to the child's intelligence at the earliest possible moment to aid his discipline.

Experience shows that this virtue is the more difficult to inculcate in school, the lower its pupils are in the social scale. The narrowness of means which prevents parents from gratifying the rational wants of their children, and which prompts them to watch suspiciously lest the children should take means to gratify these themselves, finds its not unnatural consequence in the habit of petty pilfering which has so often been found to characterize poor schools. The teacher of such a school must be the more careful and earnest in his efforts to keep his pupils honest; and he has many

opportunities in course of the daily school-life, in the school-room and in the play-ground, both to inculcate honesty and to test it. There is always a certain amount of property exposed in a school, a circumstance which the judicious teacher may turn greatly to assist him in making this virtue respected.

40. Candour.—Candour is that virtue which leads us to do justice to the character and opinions of our neighbour; and it requires special attention, from its affecting not our own character alone, but his also. It is violated when we refuse to his acts the most favourable construction they admit, when we depreciate his talents, attainments, or motives, when we misrepresent his opinions either by exaggeration or suppression of some essential particular, or when we report them out of the connexion in which they were expressed, and thus put a false colour upon them. Being an application of truthfulness, it is to be enforced in much the same way. We may notice, in addition, that the teacher has great room for exemplifying this virtue as distinct from truthfulness in general: to do so, he should, in his discipline, be careful to give his pupils full credit for what they do, and to refrain from colouring or falsely stating any faults of which they have been guilty. The force of such an example comes home to them very strongly, from the fact that all will have occasion to feel the nobleness of it. As the want of this virtue is prompted by vanity, envy, or some other form of self-love, all that the teacher does to inculcate the benevolent feelings, and the feeling of modesty, will support his exertions to inculcate candour. Any instance of it exhibited by one pupil towards another, who is a rival or who has done him an injustice, should be noticed with special approbation.

41. Kindness.—Kindness is the disposition which leads us to promote the happiness of others. Happiness is so necessary to the development of man's nature, or, to speak by reference to its opposite, a state of misery is so fatally destructive to the growth of every good principle, that the benevolent man is universally looked up to as the noblest type of humanity. Education has for its great aim to promote the happiness of the individual, by training him to habits of usefulness, by cultivating his mind and opening it to the pleasures of knowledge and reason, and by regulating his temper and disposition to those virtues which will bring him

happiness as a moral being. But its task is only half accomplished, if it do not form the spirit of benevolence which shall prompt him to look beyond himself, and to increase the sum of human happiness within the circle of his influence to the utmost extent of his power. It is true that a man's happiness depends mainly on what he is and what he does for himself; still he is dependent on those around him in a degree only inferior to that. Men come into mutual contact at so many points, that were each to fix his regards exclusively on his own rights and wants, life would become intolerable. This is true of school-life also: children's happiness depends on the attitude assumed towards them by their comrades more than on anything else in the school, and great part of the misery which they have to endure is what they inflict on each other. The school is a most favourable field for training to this virtue; for it presents infinite opportunity for its exercise, and its own success requires that the virtue shall be exercised in the daily school-life.

In inculcating benevolence, the line of distinction must be clearly drawn between it and justice, so as carefully to exclude the notion that either supersedes the other. Justice apart from benevolence does not fulfil the law of love: benevolence not founded on justice is a delusion. The sphere of justice must be marked off before we can discern that of benevolence; we must render to others their due, before we pretend to obey the golden rule—"Whatsoever ye wish that men should do unto you, do ye even unto them." It will be time enough, for example, to encourage a child to part with a share of something which fully belongs to himself, for the accommodation of a comrade, when he has learnt to yield up without grudging all to which his comrade may fairly lay claim. The chief violations of the spirit of kindness which will come under the teacher's notice are these: a selfish want of sympathy in the misfortunes that befall others; a disobliging spirit, which churlishly refuses to accommodate others, either when it could be done without inconvenience or when it would require a little self-denial; want of courtesy in speech and manner; nick-naming, which wounds the feelings of others; the playing of practical jokes to their detriment or inconvenience; tyranny or bullying on the part of the strong towards the weak, a notorious school fault; ridicule of the poor or the deformed. We may add,

as a fault proceeding from the same spirit as these, though differing in its object, and requiring very special attention, viz., cruelty to animals.

Much apparent unkindness amongst children arises from thoughtlessness: they do not consider the consequences of their words or actions, or they have not imagination enough to realize them. Whilst we are not to consider this as equally criminal with deliberate unkindness, we are not on that account to pass it over. The training to kindness consists in the training to considerateness. The benevolent man shows his benevolence in his considerateness; on the other hand, the thoughtless person is, in virtue of his thoughtlessness, eminently selfish. Kindness is often exhibited by a kind of instinct or sentiment; considerateness is never less than a virtue.

42. Incentives to the Benevolent Feeling.—Children exhibit kindness to their neighbours to a certain extent from instinct; they feel that this is necessary to secure a return of it, and so to promote their own comfort. This is to be encouraged for what it is worth, and as giving the means of inducing habits of kindness. But the teacher should not consider this foundation for the virtue as a sufficient one; he should gradually seek to foster in them the disposition to do good to others, independent of its direct consequences to themselves. And he must be content to dwell on considerations of the personal convenience of kindness for a time, of which even the school-life must sufficiently convince children, before he can make them feel the higher happiness of mind which is the real reward of benevolence. To induce them to practise this virtue, his own example and the school discipline must first be attended to. If he treats his pupils in a spirit of kindness and sympathy, he will bind them to himself, and the whole atmosphere of the school will be felt by them as fostering the growth of a similar spirit towards each other: particularly, he must set them the example of considerateness, without which they will not even understand what it means; for which purpose he may, without obtrusiveness or egotism, point out to them such features in his arrangements and discipline as are influenced by this consideration, and should refrain from wounding their feelings even when he has to pronounce censure. Without the example which his discipline sets, the measures which he may adopt in particular

cases will have little influence. When he does find kindness exhibited by his pupils, he should of course visit it with his approbation, and, so far as he has opportunity, with his confidence. For this the school presents many opportunities; there are many little responsibilities to be discharged towards the younger and weaker pupils, by his distribution of which he may mark his appreciation of character. But he should not annex any other reward to it; from its very nature, this virtue cannot be nurtured except by the reward it brings itself: it would be inexpedient, then, when a pupil has by self-denial obliged his comrade, to make up this act by compensation in any way. This hope may lead to the apparent practice of kindness as an easy way of getting approbation; but it excludes the self-denial which is its essence. In the general case, we are shut out from the use of severe measures to secure this virtue; it cannot be forced. We may compel the semblance of it indeed; but in obtaining the outward form, we should only prejudice the pupil's mind against the reality. What the pupil is not prepared to exhibit we should not require; he will think himself unjustly dealt with. The only case in which punishment can be resorted to, is to restrain the bully or tyrant: if we cannot force kindness, we must restrain oppression.

43. Faults of Temper—Obstinacy.—The position to be attributed to self-control, as an object in moral education, has already been noticed; some of the chief defects of temper by which it is violated may now be noticed.

Obstinacy is a very common fault in school, and one which causes the teacher frequent trouble. Much of it is the result of previous mis-education at home, and not a little of it is directly traceable to misgovernment in school itself. Where the teacher does not deal with his pupils in a spirit of justice and of kindness, they cannot respect his government; they attribute his punishments to the love of exercising arbitrary power, or to his own want of self-control, and they are, accordingly, prompt to resistance. The feeling of self-respect, which even a child has, will show itself in a defiant attitude, and the growth of this habit issues in obstinacy of temper. It is indispensable, therefore, before speaking of the treatment of this fault, to insist that the discipline of the school shall not be of such a complexion as to produce it.

Speaking of that obstinacy alone which belongs to the child's nature, the first object in dealing with it is to find out to what it is due. It is either a vice or a misfortune. It is a vice, as exhibited by a pupil of full intelligence and health who persists in deliberately contravening the requirements of morality. It is a vice, also, as exhibited by a pupil of similarly sound constitution, who is mischievous rather than bad, who insists on following his own will, and who aims at being the hero of the school in the eyes of his comrades. In the latter case, the offender is encouraged in his course by the sympathy which he believes to exist in the minds of his fellows for daring and fortitude, and the bestowal of which is a sufficient motive to him to brave all the terrors of school law. The teacher who would suppress such an exhibition must remove the motive which leads to it; he must turn the sympathy of the school from flowing in this illegitimate channel, and he will find no difficulty in doing this if he can make his own character respected. If he can turn this sympathy in his own favour, he has gained the advantage over the offender; and the way is clear for him to inflict suitable punishment, if the offence be persisted in. Where, however, obstinacy is not a matter of calculation, but is purely a fault of temper, supported by the pupil's own immoral inclinations, nothing remains but at once to enforce obedience. The teacher can on no account keep in school any one who is strong enough to share authority with him, and thereby to destroy his influence over the rest. When the pupil knows well what he is doing, he must apply the steady pressure of firm authority, taking care that his exactions are reasonable and his own temper unruffled, so that personal motive may not seem to be swaying him. Without provoking a contest, he cannot decline it when it is forced on him, and he cannot afford to lose it. His measures should not, therefore, be such that they can be baffled by passive resistance; he must not give the option of doing prescribed work or bearing the penalty, for the offender will, in that recklessness of consequence which attends his failing, carry passive resistance to any length, even so far as to injure himself; he must impose work which he can enforce, by chastisement if necessary. If a case occur in which he has not firmness to attain success, his influence is gone; if he succeeds in one case, he will have comparatively little trouble for the future.

Only, it is imperative that victory should be used with mildness, or rather, that the remembrance of the contest should be entirely effaced.

There is another kind of obstinacy which is not a vice, but the manifestation of a temper clouded from constitutional defect or early mismanagement. Where this is exhibited, it will be often found that nature has been sparing of endowment; often, also, that the confidence and presence of mind to use even the little she has given, have been eradicated by an indiscriminating, and, therefore, cruel discipline. This morbid state we call stupidity, and, nicknaming it so, are apt to think that we have justified unlimited recourse to severe measures. However painful to find the same immovable front presented to all his admonitions and persuasions, the teacher should remember that he is not here dealing with a sound mind in a sound body; and he should not treat as voluntary resistance what is in reality a diseased temperament. Such a disposition will not be softened by chastisement, but will rather be confirmed in its insensibility. It will maintain the struggle without yielding a hair's-breadth, but with an expenditure of vital and moral force which it is appalling to contemplate. The teacher should avoid the fatal error of trying his strength and resolution against a temper of this kind, and should, therefore, be vigilant in exercising that discrimination of character and constitution which can alone save him from making it. Whatever he can effect in such a case, must be effected by gentle steady application of measures dictated by patience, sympathy, and kindness.

44. Querulousness.—The possession of a querulous or complaining temper is a great misfortune in a world where so much has to be encountered, and it is proportionately so to the child in his little circle at school. Generally speaking, querulousness is induced by mismanagement. There are a few whose tempers are naturally marked by it, but the majority of children have a certain pride which disposes them to bear the little misfortunes that befall them, and even to boast of what they can bear. But when the parent or teacher steps in with his over-carefulness, and condoles with them on every accident, as if suffering were a thing entirely out of the question, the child comes to think that it is so, and would expect condolence with all his grievances, whether they be well-founded or trivial. Thus he grows up with the feeble tem-

per of a baby, instead of the boldness and fortitude which become a youth. It is certain that children can bear a great deal if they are taught to do it, as we see from the extraordinary fortitude they show amongst themselves. This virtue, indeed, is the point of honour with them, and we should encourage it by appealing to the pride which prompts it. By all means, when they meet with real suffering and have just ground of complaint, let us show ourselves ready to sympathize and resolute to protect; in doing that, however, let us not give ear to their imaginary or trifling sorrows, but in a good-natured way show that we expect them to bear the little ills of life with firmness. They are keenly alive to such appeals, and will very soon learn to endure. Let us point to our own example, if necessary, and the example of their comrades, showing that all have troubles to endure, and let us urge the regard that is due to him who meets them cheerfully and boldly; but this will not often be necessary, for when their rational self-respect is appealed to, they anticipate all that we can say in justification of the appeal. Success is possible, however, only to the teacher who, in his discipline, refrains from exhibiting an impatient and grumbling spirit.

45. Peevishness.—A still worse fault of temper, perhaps the most unpromising fault of all, is peevishness or fretfulness. It is of a lower character, for it implies an absence of that generous element which is the only foundation of noble temper; it is the most inconvenient, for it is a constant source of misery to the child himself, as well as to all who come in contact with him; and it is the most difficult for the teacher to deal with, for it comes under his notice only indirectly, being manifested chiefly with comrades, and is, therefore, apt to escape him altogether. From its nature, it is a fault in which the home training must be held peculiarly responsible; for it is in early infancy that it grows up, and it is at home that it must be eradicated, if eradicated at all, for there only can the self-denial necessary for that purpose be exhibited with sufficient steadiness and vigilance. To the extent to which the teacher can influence it, he must do so by an open and cordial manner towards the child personally, by a cheerful manner in the discharge of his whole work, and by using his influence in the school to keep him out of the way of provocation. This defect of temper is so often conjoined to deficient

animal spirits, that he may find the exercises and sports of the school an effectual check to it, from the hearty sympathy which such contact with companions invites. But confirmed peevishness may possibly only find in such contact opportunities for displaying itself, instead of a motive for self-restraint; in that case, something of the nature of a penalty must be found in prohibiting the pupil from associating with his companions, from fear of the annoyance he may give them. These two seemingly opposite modes of dealing will both call up the social instinct to our aid. The evils of this temper may be exhibited with great effect in the course of moral instruction. Moreover, the teacher may ascertain, both directly from himself and indirectly from others, when the pupil has been endeavouring to exercise self-control; and on such occasions, he should privately express his approbation, remembering that this is due to the effort as well as to the success of the effort.[1]

46. Violence.—Violence of temper is a hopeful fault, being generally an excrescence from that frankness and decision which it is an object of education to cherish, and not unfrequently also exhibited by those of earnest and generous temper. It is commonly manifested by children towards their companions, less frequently in outbreaks against authority; in either case, in restraining the violence, we should aim at preserving the force which underlies it. Such conduct being either a forgetfulness of the kindly spirit in which the child should act towards his neighbour, or of the reverence he owes to his superiors, whatever progress the teacher makes to inculcating these virtues goes directly to the suppression of this fault. Sometimes the outbreak is so purely a matter of impulse, and so free from malice, that the child immediately betrays his sense of wrong in his countenance and manner; in such a case, a single sentence from the teacher, expressing a hope for the future, is sufficient to support the child's own self-correction; anything more is not only superfluous, but injurious. Where there are no signs of this inward working in the pupil's mind, the teacher should not set himself to subdue the outbreak

[1] Happiness is an indispensable condition of good education, whether of the education of school or the self-education of after life. Our happiness depends mainly on ourselves; in a less degree on others. A cheerful and contented spirit will go far to secure it; for the rest we must look to natural kindness amongst members of the same society. The art of being happy, and of making happy, should never be absent from the thoughts of those who have influence over the young. See *Taylor's Home Education*, chap. ii.; *Early and Infant School-Education*, chap. iii. and compare sect. 41.

by sheer force; neither in his general management of his school, nor in his treatment of particular cases, should his example betray the influence of passion. Maintaining his own self-control, he should provide that the object of the violence be not attained, if it be still practicable to prevent it; then let him wait for the excitement to settle down, and appeal to the reason and self-respect of the offender, endeavouring to show the dignity of self-control, and the weakness of allowing himself to be carried away by the passion of the moment, and of doing things which he is afterwards likely to regret. An appeal of this nature, judicious and well-timed, will seldom be resisted. Where the pupil's own self-respect is not strong enough to impose the necessary restraint, the teacher may still appeal to the experience which all have of the necessity of mutual forbearance, and particularly of the extent to which pupils require forbearance from their teacher.

47. Modesty.—Humility, or that habit of mind in which we do not think of ourselves more highly than we ought, is a virtue almost lost sight of in the world, from the negative and silent character of its manifestations; it is not only a virtue, however, of the most substantive kind, but the necessary condition of many other virtues, and as such, one of the severest tests of the virtuous character. In the unerring morality enjoined in the Christian Scriptures, accordingly, there is no virtue more insisted on, unless it be love itself. This virtue is not to be confounded with mean-spiritedness, or that abject state of feeling which permits a man to surrender the rights of his character to any one who chooses to infringe them; whilst it thinks little of personal considerations, it thinks the more of character and principle. In noticing this virtue as an aim of moral education, it must be borne in mind, however, that it is not of early growth in the young; there are virtues which are the mark of maturer years, like prudence and humility, and upon which it would be dangerous to character to lay too much stress at a time when they cannot be appreciated. The one form of it to which we can accustom children is *modesty*, exhibited chiefly in a quiet, unassuming spirit, and in the readiness to submit to merited admonition and reproof.

The great enemy to this virtue is vanity, or undue self-esteem; an odious feature of character, which leads away from the real motives for the pursuit of knowledge and virtue, to the assumption

of false appearances, and which strips our best actions of all claim to regard. This vice may exist very strongly in the young ; and should be strictly combated in education, which seeks to promote their own happiness and their power of contributing to that of others. Vanity is not to be excluded by denying the child's merits, and withholding from him all praise ; to do so would be untruthful and dangerous, because the child will discover its untruthfulness. Such a course would therefore lead us into a worse evil than that we seek to avoid. It would, moreover, be inexpedient on other grounds ; for the love of praise, as a motive given for good ends, is capable of being applied so as to be the strongest stimulus to duty. But we should praise only when praise is deserved, and then in rational amount, making it the consequence of effort ; when it is not deserved, we should not bestow it ; on the contrary, if censure be becoming, it should be faithfully dealt out. It is flattery, or the praising of unreal merits and the suppressing of blame for real faults, that develops vanity. When praise is given thus injudiciously, the pupil loses sight of the action itself, and fixes his thoughts on the praise ; he expects it, he cannot do without it, and, having his taste for it depraved, he resorts to false appearances that he may extort it. The true principle of proceeding with this vice, then, is to give praise at first with discrimination ; this will habituate him only to seek the praise of those he loves and trusts, and for what he believes to be real merit ; and it will render him indifferent to the flattery of all else. To mitigate the vice when it has grown up, the teacher should withhold the stimulus gradually more and more, till he has accustomed the pupil to a standard nearer his real desert. He should not listen to the boasting story, but treat very seriously all false appearances and borrowed excellences, so as to impress the pupil with the conviction that solid merit alone will receive, as it alone can deserve, praise. In the case of advanced pupils who exhibit this failing, he may attack it through that pride with which it is so often but so wrongly identified ; he can appeal to their own self-respect, not to render themselves odious or ridiculous by such exhibitions.

48. Its Opposite Violations—Forwardness, Shyness.—It is not uncommon to find in children a sense of self-importance and a forwardness of manner, which betray an unconsciousness of their

true position. Nor is this to be wondered at; like so many of their failings, it springs in large measure from their inexperience. As the teacher meets it, it is often due to previous mismanagement, which has spoken to them of their rights more than their duties, and led them to think themselves entitled to the deference of those around them. It is also often found as simply one of the manifestations of vanity. Where this is its character, the measures necessary to counteract the underlying fault must be resorted to. Where it results from a naturally stirring disposition, it is not difficult of cure; but in dealing with it, we should avoid suppressing the frankness and boldness which for the most part prompt it. Our mode of intercourse may of itself have a powerful influence; we should quietly but good-naturedly ignore the child who speaks in this false key, and rather notice others who exhibit becoming modesty. Where forwardness is not a tendency merely, but has become a settled habit by bad training, it will be expedient, in addition to these negative measures, to direct the child's attention to his own inexperience and weakness and dependence; it cannot be difficult to show him how little self-confidence becomes him. Except when some instance of forwardness has occurred in a marked manner before the school, the fault may be adequately dealt with by appealing to the individual himself.

The teacher of a common school will often have occasion to notice an opposite fault of manner, viz., shyness, which is a morbid form of modesty. All children manifest it more or less on their introduction into a new sphere; but this degree of it may be expected to cure itself when the novelty wears off. If it does not, the fault arises from natural timidity of temper, or from a greater than average seclusion from the society of comrades, by which he might gain experience, and the confidence of bearing which accompanies it. Just as, in repressing forwardness, the teacher must take care not to repress the frankness and boldness on which it rests, so in seeking to overcome shyness he must avoid doing anything which may lead the pupil away from the commendable modesty out of which it springs. No general measures are required here; it will be enough to deal in an encouraging manner with the particular pupil in the course of class-work, and to arrange that he associate freely with his companions. What

such a pupil most needs is intercourse with those above him; the casual opportunities of conversation between teacher and pupil, which are incident to their common engagements, should accordingly be turned to account for this purpose.

49. Temperance, or the Regulation of the Instincts.—The next virtue we shall notice is a very comprehensive one: it is that control of the appetites which is emphatically named in the New Testament Scriptures temperance.

All the emotions of our nature which aim consciously at gratification may be considered as appetites; but moralists have conveniently ranked them into two classes:[1] the *Desires*, which are manifestations of our spiritual nature, such as the desire of power, the desire of distinction, the desire of possessing, or the desire of liberty; and the *Appetites*, which have their seat in our physical nature, such as hunger, thirst, and sleep. These two classes differ from each in certain obvious particulars: thus, the desires act steadily when they act at all, whereas the appetites are intermittent; the desires act with a steady increase of power and capacity, never reaching their full aim, whereas the appetites are bounded in their gratification by physical considerations; the desires are severally of different degrees of force in the same individual, some existing in great intensity, whilst others show no signs of animation at all, whereas the appetites act strongly in all. This last difference springs out of the palpable and fundamental distinction between the two classes, that, whereas the desires are the elements out of which the character is formed, the appetites are necessary for the maintenance of life itself.

These desires and appetites are in themselves neither good nor bad; they are parts of our constitution equally with reason and imagination, the eye and the hand. They are simply capacities, and they take their moral character from the mode in which they are used. They are given us for good ends, and are not to be decried because the bulk of mankind find in them their great temptations. They lead to virtue those who can use them, to vice those who cannot. It is a fatal mistake to suppose that the aim of moral education should be to suppress them, or any of them. Success in this aim, supposing it attainable, would not be virtue, but a violation of our moral nature, and, though it might seem

[1] Stewart's *Outlines of Moral Philosophy*; Abercromby *On the Moral Feelings*.

to remove one source of danger, it would, by the invariable law of compensation, lead to increased dangers in other directions. On the other hand, because these desires are natural to us, we are not therefore to give ourselves up to their indulgence, on the convenient but delusive plea that we are merely obeying our instincts. These are given us to use, not to abuse; and we transgress in this matter whenever we lose sight of their true purpose, and, not satisfied with the legitimate pleasure associated with their use, seek through them either a merely animal pleasure, or the gratification of hateful emotions. Virtue is a mean between two extremes, and we can avoid these extremes only by adhering to the mean; all other efforts to avoid them will prove unsatisfactory in their result. To give the child the power of refraining from the abuse of any desire or appetite we must teach him its true and rational use; if we ignore this, he has nothing wherewith to protect himself against the pressure of the temptation to excess. This may be illustrated from what has already been said, as all the virtues which have been named consist in the mutual action and counteraction of these parts of our nature. The desire of power or influence is rational in itself, but the possession of power should be exercised with a prudent regard to the circumstances of others, whilst it should not be aimed at beyond what we can turn to account; we teach him this by rationally exercising our own power over him whilst he is a child, and by impressing on him the benevolent affections. We encourage the desire of distinction as a motive to good works; and by gratifying it only on thoroughly good grounds, and in moderation, we hope to exclude vanity. We prepare the child for that liberty which he desires by first accustoming him to obey the law of our absolute will, till he is old enough and prepared by habit to recognise some higher law, which shall prevent him from turning his liberty into license. We teach him to value his possessions for the comfort they bring him, and the good they enable him to do; and in this way can foster a spirit of frugality, industry, gratitude, and liberality, whilst we preserve him at the same time from the opposite extremes of prodigality and avarice. Generally we regulate the action of all the desires which are the outgoings of his natural self-love, that we may have the power to restrain them at the point at which they would pass into selfishness in any of its innumer-

able forms; thus hoping to inculcate justice without churlishness, submission without cringing, courage without obstinacy, modesty without mean-spiritedness, decision without forwardness, rivalry without envy, sincerity without malice. We shall now notice how, in the same way, virtue in the regulation of the appetites lies in a mean.

50. Control of the Appetites.—We have no occasion to stimulate the exercise of the appetites; natural instinct secures that sufficiently. The business of education is to regulate them. Not much attention is in general paid to enforce self-control in this department of our constitution; sometimes indeed it seems to be forgotten that a moral character attaches to it at all. Little notice is taken of excess, which, though often found to be inconvenient and even painful, is seldom regarded as wrong. The regulation of the appetites can therefore hardly be said to rank amongst the virtues in common estimation. And when we once yield to them, the pleasure of the moment is so keen and so easily obtained, that it becomes soon almost hopeless to resist their tyranny. Yet, unheeded as their indulgence may be, either by ourselves or by others, it gives a predominance to the animal over the spiritual part of our nature, which is not only a vice, but which shakes the very foundation of all virtues. Hunger, and thirst, and sleep have been named as examples of the appetites; the others do not fall within the scope of school-education. The vices of the glutton and of the sluggard can be illustrated by appeal to the pupil's own experience. The vice of the drunkard, which is the particular vice we have in view in speaking of the appetite of thirst, cannot; and it might on this account be unnoticed in early years, were it not that children have it forced on their observation. They are so utterly incapable of understanding it, that the only feeling which it calls up in their minds is ridicule and mirth; the teacher should take it entirely out of the category of trifling or amusing things, and caution them to look on it as a disease or a misfortune, as well as a vice, which calls for their pity and aversion. This will not be so difficult as to secure their respect for the two forms of temperance whose nature they can understand from their own experience. And the explanation of the apparent anomaly is this, that though they can understand the vices of gluttony, or luxury, and sloth, they do not feel these

to be vices. This is not unnatural in the sensuous existence of childhood and youth, where physical growth is vigorous, and the demands of physical appetite proportionately strong. The indulgence of these can hardly be regarded as a vice in the earliest stage of life, and it is rather because it will become a vice in mature years, and a most formidable one if not checked, that children should be familiarized more and more with its moral aspect.

The special or secondary desires and appetites which spring out of desire and appetite in the abstract are innumerable; but they need not be further noticed than to observe, that whilst the former may be commendable or the reverse, and may therefore be cultivated as well as repressed, the work of education must aim at keeping down the number of the latter. The less we are under the dominion of appetite, whether general or special, the more intimate are our relations with virtue.

51. Diligence.—The virtues which characterize the discharge of our daily work will not be undervalued by any one who comprehends the necessity of work to the education of man individually, and to the happiness of man collectively: these we may designate by the general title of diligence.

Success in training the young to diligence will depend on the associations with which it is surrounded. Generally it is connected in their minds with irksome restraint and compulsion; hence the attitude of passive resistance which in so many cases they adopt towards their work. They are naturally inclined to activity; and this inclination should be confirmed so as to issue in settled habits of working, by investing their daily exercises with intelligence and interest. By how much the power of attraction, faithfully used, falls short of attaining the end, and it will do so more or less, it must be supplemented by the exercise of authority. The example of cheerful diligence on the part of the teacher will also be felt as a powerful stimulus.

With advanced pupils who have some experience in the connection between antecedents and consequents, the arguments drawn from a consideration of the future should not be overlooked. Their wellbeing in life must be shown to depend on the diligence they bring to the performance of its duties, and their happiness to be measured by their usefulness.

The school has great facilities for inculcating this virtue. Its

whole atmosphere is one of work ; the law of work is felt everywhere throughout it. The teacher works, the pupils collectively work ; so that example is held forth in its most influential form. Work comes to be looked upon as the very condition of life at school ; work of that orderly, strenuous, and progressive sort to which alone the title of virtue is due.

The violation of this virtue of diligence arises from one or other of the three following faults of temper : (1.) Indolence ; (2.) Irregularity, or want of method ; (3.) Irresolution.

52. **Its Threefold Violation.**—(1.) *Indolence.*—Indolence is not that natural volatility which may be expected to disappear under the ordinary influence of education, but the indisposition to work which resists and survives that influence. Children often exhibit a sluggishness in some occupations, and not in others ; they may be slow in lessons and vigorous at play ; or slow in some lessons and alert in others. This is so far hopeful, as showing that they are not indolent by disposition, but only that their taste for certain occupations has not yet been developed. It is for the teacher to discover how he may approach such pupils with these subjects, with the best prospect of drawing out their slumbering energies. Indolent or 'sauntering' children, as Locke calls them, are they who are dull and indifferent to all engagements alike. This character is almost always combined with feebleness ; and it is seldom that amidst his multifarious work, the teacher can deal with such pupils so directly and individually as to alter their character. It is by a thousand little channels that the necessary influence is to be exerted on them, so that the remedy lies at home, rather than at school. All that the teacher can do is to encourage them both in school-work and in recreation ; in the latter more especially at first, as their sympathies with it may be more easily excited. And in his exactions he must, for a time, be content with much half-work, and work not performed in the best spirit.

53. (2.) *Irregularity.*—The perception of order or method in work, both of what it is, and what are its advantages, is the result of specific intellectual and active training. Without this the natural liking which children have for order, will have no practical influence on their conduct. A regard to method must be felt by them as requiring, first, punctuality, which assigns a time for everything, and does everything at its time ; second, order,

which finds a place for everything, and keeps everything in its place; and third, method, which overlooks no part of work, and yet disposes of all its parts with an appreciation of their relative importance. The advantages which flow from method, in the saving of time and labour, can be as easily impressed on the minds of the young by reference to their own experience, as the example of it can be effectively exhibited by the teacher in his conduct of school work.

54. (3.) *Irresolution.*—What we have here in view is to accustom advanced pupils—for with them only is it practicable—to lay down an object for themselves more or less distant, and work steadily up to that object. This can be done much more effectually at home, where the pupil is constantly under inspection, and there are infinitely more points of contact between pupil and parent; but to a certain extent it can be done at school also. The pupil must be encouraged to form resolutions, then, on such matters as the teacher can take cognisance of, *e.g.*, that he will perform a certain amount of work in a given time, or that he will refrain from a certain questionable line of conduct. A consciousness of the necessity of forming resolutions, and the ability to form them, lie at the foundation of character. But the habit of forming, and then falling away from, resolutions is as destructive to strength of character, as the habit of forming and keeping them is conducive to it. It is not only that loose habits of work are thereby acquired, and vacillation of purpose: the violation of a pledge to which conscience has given its sanction is a moral fault, and goes directly to weaken the power of conscience. The solemn nature of a resolution should therefore be explained to the pupil, and great care enjoined in forming resolutions, so that they may be directed to profitable ends. For this purpose, all the resolutions he forms should be very definite, so as never to admit of any doubt as to whether they are carried out or not, or how much self-denial is involved in carrying them out. Vagueness is the frequent and not unnatural cause of much failure in this matter.

Many who fail in carrying out their resolutions, are not slow in finding excuses for their neglect, which they urge with great plausibility. This habit is the mark of an easy conscience, and should be rigidly combated. In most cases the excuse has reference to matters which might have been foreseen in forming the resolution.

The pupil who resolves must be led clearly to understand, that what is required is absolutely the performance of the thing resolved on, and not any reason for its non-performance. The trouble and inconvenience it may cause him should be taken account of before, and not after, resolving.

55. Cleanliness.—Cleanliness, whether in its general sense of propriety in personal habits, or in its particular sense of tidiness in personal appearance, may well be reckoned amongst the virtues, when we consider how much it adds to the comfort and elevates the tastes, both of the person who exhibits it, and of all who are within the sphere of his influence. In schools for the lower classes, the means of inculcating it should be a special study of the teacher. He cannot plead want of means to encourage it. He has first of all the strong influence of his own example: let him be most scrupulous in attending to the state of his schoolroom, and to his own appearance when he comes daily amongst his pupils. It would be inconsistent with experience to maintain that this influence is used with all its attainable effect. He should further require his pupils to be equally correct in their habits, scrupulous as to the condition of their property, and tidy in their persons; commending those who are so, singling out for disapprobation those who are not; and he should carry out his requirements by daily silent inspection. All habits, moreover, which are at variance with cleanliness and decency, whether in school or out of school, should be rigidly forbidden. The enforcing of the virtue of cleanliness has this great advantage, that all can judge of and appreciate its results; and nothing disposes one more readily to think favourably of a school than to find that all its work is carried on amidst material comfort, order, and neatness.

CHAPTER IV.

RELIGIOUS EDUCATION.

56. The Religious Sentiment.—The religious sentiment has its seat in the conscience, and is therefore universal. Everywhere man forms to himself a God, whom he invests with certain attri-

butes, whose sanction he regards as binding, whose likeness he aims at, and whose approval he desires. This sentiment is the strongest incitement to morality which it is in our power to apply. The sense of an ever-present God might seem at first sight to be one of the highest inferences of the reason; but no one has that sense, or at least is capable of having it, more powerfully than the child. In the absolute weakness of his nature he is so dependent on the protection of a superior power, the benevolence of a considerate heart, and the prudence of a superintending wisdom, that he at once conceives of his parents as possessed of them in an indefinite degree. To him, their power, goodness, and wisdom are boundless; and whether they are present or absent, he carries about with him a sense of these, so that he feels himself encompassed by them at every step. If, then, the reverence, affection, and confidence which the child feels towards them be directed by them to a higher Power, to the Almighty, All-good, All-wise, who has made all and is the end of all, he opens his mind to this conception of God with perfect simplicity and faith, as being most natural and necessary.

Strong as this sentiment may become, we are to remember that, equally with his other sentiments, it is not of necessary development. It exists as a capacity, or germ of power; education must unfold it, and confirm it when it is unfolded, till it shall pass from a sentiment into a conviction. The grounds of the religious sentiment are the same to the child as to the man—conscience and reason. Conscience is the earliest available and the most satisfying; as a moral being, he feels it natural that the law and sanctions of right should emanate from an infinitely great and good God. The testimony of conscience, however, must be supported by that of reason; for which purpose the attributes of God must be considered as manifested in His works; His greatness, as seen around us in the heaven and the earth; His goodness, as experienced in our own lives; His wisdom, in the arrangements He has made for the course of nature.

If to this demonstration the teacher add the example of himself recognising God in every place and every action, the religious sentiment will become a fixed principle with the child, exercising its influence on his whole conduct.

57. Christian Morality.—Natural religion can never teach a

higher morality than what is suggested by the natural conscience, though it strengthens the sanctions to that morality. The Christian religion brings to us a perfect law of life from God; and thus it teaches a more comprehensive morality, not than the conscience can recognise—for all religions whatsoever are an appeal to the conscience—but than conscience can ever discover of itself, or, at the least, has discovered; whilst to all its requirements it lends sanctions more clear, weighty, and therefore more cogent, than those which the unaided conscience has discerned.

The Christian religion sets before us a higher standard of duty, both to ourselves and to our neighbours. It teaches us to look for morality in the heart; to judge ourselves by the thought and not by the outward act, by what we are and not by what we seem. And hence it attaches a prominence to those personal virtues of self-control in the desires and appetites of which the world takes so little notice; making them, indeed, the foundation of the virtuous character. If it is not singular in impressing these virtues, it at least sets them before us with an emphasis peculiar to itself. Another distinctive feature of the Christian morality is the ground on which it places the social virtues; it gives to the law of love an indefinite extension, and requires us to act toward our neighbour as we would that he should do to us.

But it requires of us something beyond the practice of virtue, even when we give to that its widest interpretation. We are not only to discharge all known duties, but we are to do all to the glory of God; we are to cultivate an intimate and habitual sense of His presence with us, and to perform the daily work of our lives as work which He has given us, and as therefore to be performed according to His will. In every region of the world which He has made, we are to see Him as Lord. Children must be brought up to take Christian views of external nature; not simply to raise their thoughts to Him on the occurrence of phenomena more strikingly suggestive of power—such as the storm on the ocean, or the desolation of the volcano or desert; but amidst the silent order of things, the beauties of earth around them, the freshness of seed-time, the golden stores of autumn, the ice or winter. The rich provisions made for the sustenance and happiness of all orders of beings, should impress them with a sense of the goodness of that God who is the author of all. They should

be taught, moreover, to take Christian views of Providence. The contemplation of great events, the rise and fall of empires, the blessings of a rich harvest, the misery of a pestilence, turn all thoughts to Him; but their thoughts should take this direction equally in connexion with what are considered things of course—the daily meal which sustains their bodies, the nightly rest of sleep, the blessing of personal position in social life, the freedom or deliverance from expected dangers. And this thankful acknowledgment should prepare their minds for resignation and confidence in Him amidst the cares and afflictions of life. In a similar way should they be taught to take Christian views of their own conduct; to refer all they do to His will, and expect His blessing; to be diligent in business, as serving God in appointed work; to do all in such a spirit that they can present it as an offering well-pleasing to Him.

58. General Course of Religious Instruction.—Christianity makes God known to man as a Father and as a Governor. As a Father, He is the source of their life and happiness; as a righteous Governor, He rewards holiness and punishes sin.

The first religious instruction to be presented to the young mind is the relation in which we stand to God as our heavenly Father. He must be exhibited in the display of His infinite fatherly goodness, and as claiming the entire obedience due to an all-wise fatherly authority. This is an aspect of the divine character which the child can comprehend, for it is the same in kind with that relation in which he is conscious of standing to his earthly parents. The nature of sin, the displeasure of God, as a righteous Governor, which attends it, and the punishment which it involves, are essential ideas in the Christian system, but they do not find access to the child's mind till a later date. Obedience and happiness are the ideas of his early existence; not disobedience and misery. He must be habituated to the infinite holiness and goodness of God's character, on the one hand, and he must, on the other, have experience of transgression of the parental law and its consequences, before he can rightly apprehend the position in which sin places him in the sight of God. Without observing this natural order in teaching, we shall not make him feel the reality of the doctrines of religion.[1]

[1] Girard on *The Mother-Tongue*, Book IV.

Religion can be suitably conveyed to the young only by incidents from life which exhibit in action the truths we wish to teach. Of such materials the Scripture history presents abundance in its personal histories and its parables. It is not till a later stage of the pupil's advancement that purely didactic instruction carries with it any weight.

Religious instruction is an appeal at once to intelligence and feeling; and it loses its weight when its character in either of these respects is overlooked. It is to be addressed to the child's mind in the same way as ordinary instruction. Its sacredness will not make it profitable, if it do not enter the child's mind through the ordinary conditions of intelligence. The teacher's manner and tone may show appropriate seriousness; but he is not on that account to neglect the laws of good teaching. Religious instruction, however, must address itself to the feelings as well as the mind. We have seen in the case of moral education that there is no necessary connexion between the intelligence and the conduct; and so the pupil may have a perfect understanding of the truths of religion without embodying them in his life. The teacher should therefore strive to bring home the truth to the pupil's conscience, to impress him with reverence for it, and so to lodge it in his heart that he shall always feel its influence, and regulate his conduct by it.[1]

How the different parts of religious instruction should be handled with this view, will fall to be shown when we come to treat of Method. (Part iii. chap. 13.)

59. Relation of Religious to Secular Instruction. — The truths of religion form a system of doctrine, and, as such, must be specially studied; but their influence is designed to be felt in all that we do. If, then, there be no real religion where the whole thoughts and actions are not religious, there is no real religious teaching where the whole work of the school is not conducted in a religious spirit. We must have the separate systematic religious lesson; but, if we have nothing more, there is great danger of the pupil's mind becoming possessed with the idea that religion is a thing for special seasons or for special moods, and not for all, and that thus its truths may practically be stript of their influence on the daily life. There will be felt not merely a

[1] Arnold's *Life*, pp. 118, 119.

severance between them, but an opposition; the religious work will be confined to the smallest limits, and regarded with a kind of fear, from the restraint which it is supposed to exercise over ordinary engagements. To maintain for religion its influence over the whole work, we must maintain a sufficient and judicious connexion between them. How far this is done in school, will depend chiefly on the tone of the routine engagements and of the discipline, but in great measure also on the incidental religious instruction. Religion is designed to hallow all our work; that which is pleasant and recreative, as well as that which is serious and severe; and so its sanctions should be thrown around every aspect of the school-life. The manner of doing this is all-important; many who are duly impressed with its propriety defeat their own end by the way in which they attempt it, or even produce the results they seek to avoid. It is not by continued lecturing in season and out of season, that the child's mind is to be influenced towards religion; but by dropping the few words of guidance in his willing and attentive moments. The soil must be prepared for the seed.

60. Religious Influence in School-Discipline.—The highest object of religious education being to accustom the pupils to regulate their whole conduct by the principles of religion, it becomes a most important question to what extent, and in what way, it is possible to train them to do so in connexion with the school work. This association between principles and conduct, to the extent to which it can be effected at all, is to be effected indirectly. We have seen that in the course of instruction, the teacher can be at no loss to find opportunities of directing their thoughts to God, and of impressing upon them that all their duties are part of the obedience they owe to Him. Such representations will not fail of effect when made in a good spirit, and at a time when their minds are calm, well-disposed, and receptive.

Yet there is a danger in associating the influences of religion too closely with the routine work of school; it is at least as probable that the former will thereby be brought down to the level of the latter, as that the latter shall be raised to the level of the former. There are strong reasons why religious motives should not be used as ordinary means of discipline. On the one hand, the influence of the religious sentiment as a practical principle

of conduct, to overrule the many more palpable motives which present themselves to children, and particularly to children at school, is, even in the most favourable circumstances, seldom so great as to be relied on. But particularly when a pupil has been taken in a fault, his mind is in a state of excitement which entirely excludes the prospect of success in appealing to him with this sentiment; he is absorbed with his hopes and fears, with irritation, or with some other strong sentiment. Besides, when such considerations are adduced at such a time, the teacher exposes himself to the suspicion of using them rather to sustain his own authority than out of regard to his pupil's highest welfare. Even when he appeals to the sanctions of religion only in serious cases, there is sufficient risk of these consequences to induce him to be extremely circumspect in estimating his prospect of success. As for the habit which some indulge in, of appealing in a routine way to such motives in connexion with the common incidental faults of childhood, nothing is more to be reprobated; its folly is only equalled by its criminality. Such appeal virtually stigmatizes these faults as sin. The child, though he has not much power of reflection, feels instinctively the untruthfulness and injustice of this regimen; and the only result it can have on his character will be to generate unbelief in the reality both of sin and of the venerable sanctions by which it is sought to be checked. Under such a discipline, the child will grow up with no sense of law at all, either human or divine; for he has been virtually taught to hold in contempt the highest law and the strongest sanctions by which human conduct can be regulated.

61. **School Devotions.**—To cultivate the spirit of devotion, which is the great means of nourishing the religious sentiment, the school has the influence of example to employ, as well as of instruction and exhortation. It can exhibit a devotional spirit in its own work. If the prayers used in opening or concluding the exercises of the day are marked by coldness, formalism, and want of adaptation, they will only cherish a feeling of indifference or aversion; but where they are framed with special reference to the intelligence of those who are to offer them, and to the wants, trials, and duties of school life, and are uttered in that reverent and fervent spirit which alone fixes the imagination of the young, they will have no small influence in nourishing a spirit

of devotion in the pupil, whilst they also set him an example which he may imitate in his own personal prayers. The instruction given in course of the religious and other lessons should also, when such considerations occur as the greatness or wisdom of God, our unworthiness, our grounds of gratitude to Him, suggest the propriety of acknowledging them in prayer.—This part of school duty should claim the teacher's special regard and study.

CHAPTER V.

SUBJECTS OF INTELLECTUAL INSTRUCTION.

62. **Education and Instruction.**—The design of intellectual education is to make well-informed and intelligent men. To make them well-informed, it must give them knowledge ; this it does through instruction. To make them intelligent, it must exercise all the powers of their mind on the knowledge which it presents ; this is education. It is of the utmost importance to apprehend correctly the relation between these two processes ; to understand them, not merely as they may be contrasted, but as they must be combined. Separable in idea, they are inseparable in good practice. Instruction is not like water poured into a vessel, but like food which must be digested ; to education we must look for the digestion which assimilates it for the support and growth of the system. Food nourishes only through digestion, and there is no digestion without food as its material : even so is instruction fruitless without education, and there can be no education without instruction. But whilst each of these processes proceeds through the other, each does not exist solely for the other. Solid instruction can be given only when the mind is exercised on what is addressed to it, that is, when it is educated whilst it is being instructed ; yet education is designed for more than merely to carry home the instruction upon which it acts. It has a future and permanent, as well as a present, value ; the powers of observation and judgment to which it leads are designed to be applied to the affairs of life and to the self-acquisition of knowledge in after years. So also the instruction which the mind

receives, whilst intended at the time as materials for the exercise of the several faculties, has of itself a distinctive value in respect of the knowledge it imparts; more or less, according to the nature of that knowledge.

"There is an essential difference," says M. Rendu, "between instruction and education. Yet nothing is more common than to confound the terms in speech; and, what is more serious still, the ideas attached to the words are also confounded in many minds. Many parents, it must be confessed, do not think of requiring for their children anything beyond instruction, considering study as the whole of education. Many teachers also think that they have discharged their duty when they have imparted suitable instruction to their pupils. 'That is a fatal error, which, by lowering the work which the teacher is called to perform, misconstrues the character and takes away the value of instruction itself. Education and instruction are closely united, as inseparable elements of one process; but instruction is only a branch of education, and a subordinate branch.'

"Instruction gives man a certain amount of knowledge and certain talents; education cultivates the faculties by which knowledge must be acquired and talents turned to practical account. By instruction we learn certain things; education enables us to use properly what we have learned. Instruction gives us resources to meet such and such a condition of life, and prepares us for a particular career; education puts us in possession of general rules applicable to all circumstances and all careers. It is education in short—and this is the great reason of its excellence—which, by forming the moral character of man, suitably prepares us for the high destiny of our nature, and enables us to reap the advantage of all the gifts we have received from Providence; it cultivates the first stage of existence to make the whole life fertile; it guides us throughout this transitory scene; it prepares us for our eternal state.

"Instruction and education, though distinct, are united; they mutually support each other; the one without the other is incomplete. In vain shall we have exercised all faculties, if we have not applied them to any object; but it would be dangerous on the other hand to give knowledge and light without imparting at the same time good habits to guide us in using these intellectual treasures.

"Nothing contributes more to the effectiveness of instruction than a good education; the mind, accustomed to regulate its action, obeying sound and sure rules of conduct, in the possession of faculties which it has made more energetic by frequent exercise, receives instruction of various kinds, with eagerness and with profit. But the teacher should also make each line of instruction advance the whole education of the pupil. Instruction, it has justly been said, should be educative; that is, its methods should have an essential tendency to cultivate the mind and heart. Further, instruction is essential to

the full cultivation of these; it throws light upon the rules of duty; it elevates man in his own eyes; it contributes to the removal of the gross tendencies, blind prejudices, furious and unmanly passions, which generally follow in the wake of ignorance.

"Whilst we attach a high value to instruction, then, let us be convinced of the indispensable necessity of education, especially if we have under our care the children of the poorer classes. They are the class whose education is most frequently neglected, and yet they have most need of it; their instruction is necessarily limited, and therefore will not produce the results which may generally be looked for in their moral progress, when it is carried to a higher standard. Is it not indispensable, then, that he who has charge of children, labour with all his might to raise their sentiments, to develop their intelligence, to awaken their dormant faculties, and to replace their often debased habits by habits of virtue and purity? In the arduous toils which they will be for the most part called on to engage in, they will have little occasion for theoretical knowledge; but they ought to be fortified against the temptations of hard necessity by the resources of a well-regulated heart. Strangers to those happy circumstances of position and of rank which impart to the children of the better classes a kind of natural education, they require the more absolutely a positive training, and it is seldom they can expect this from any but their teachers."[1]

In treating of intellectual education, we are required to determine upon two main points—the subject-matter of the instruction to be imparted, and the nature of the educational processes to be conducted.

63. **The Mother-Tongue.**—Language is recognised everywhere as the principal subject of school instruction.

The most pressing intellectual necessity of man is a knowledge of the language which is used as the medium of intercommunication in the society of which he is a member. Amongst civilized nations it is not enough that he should limit himself to that knowledge of it which nature provides for every one by imitation of speech; he must know the full form in which it is used for the circulation of thought, that is, both as it is spoken and as it is written. Whether it is possible to cultivate intelligence, and how far, through a knowledge of spoken language alone, is not the question. Where the whole knowledge and thought of a society are committed to written records, no one can have access to the treasure but through the medium of an acquaintance with written language. In point of fact, it is through such knowledge that the

[1] *Cours de Pedagogie*, by Ambroise Rendu, Part I. Chap. i.

self-education of manhood is rendered possible ; and as the design of the school is to prepare the child for the highest use of life, its first duty is to give the means of this self-education. The claim of language to the most prominent place in school-work rests securely on its instrumental value.

A full knowledge of written language implies an acquaintance with the following aspects of it :—*Reading*, with *Spelling*, which teaches the sense, sounds, and forms of its words ; *Grammar*, which teaches its constructions and their mutual dependence ; and *Composition*, which teaches the correct expression of thought.

64. Writing.—Instruction in writing may be looked on as the complement of instruction in language. The power of expressing our thoughts in writing, and consequently a knowledge of the manual art of writing, is required by the fact that written language is the medium of conveying thought. It is true that we may profit by reading what others have written, without being ourselves obliged to write ; they could not thus instruct us, however, unless they had the power of writing. And, in fact, every one deserves and needs to be able to convey his thoughts in writing ; it may be to instruct others ; if not so, to state the transactions of the business amidst which his life is passed ; if not so, to interchange with friends the expression of thought and affection. The manual art of writing is, therefore, to be included among those branches of instruction which, from their value as instruments in after life, are indispensable parts of school-work.

65. Arithmetic.—To the two branches named must be added arithmetic. Number is the measure of time, space, and quantity, without the application of which we could not realize the subject-matter of our knowledge, or distinguish the relation of its parts ; that is, we could have no knowledge at all. To pass to a less abstract consideration, it is the systematic application of number to value and quantity which alone renders business practicable ; in other words, which enables us to conduct, according to rational and uniform practice, that interchange of the material comforts produced by the labour of different classes, which is an essential feature of all civilized society. A knowledge of number is therefore necessary to every one who wishes to take part in the business of life. On these two grounds, general and special, does number form the third of the triad of instrumentary subjects.

66. Position of the Instrumentary Branches in School.—It is a sufficient argument for these branches being taught in school, that they are instrumentary. The school must prepare the pupil for life. Whatever else it teaches, it must teach these; and it fails in its first duty to society if it does not teach them effectively. If the pupil leaves school with only the knowledge of these, he has the means of supplying all his defects at his leisure; if he leaves it unprovided with them, he is without the means of acquiring further knowledge, and his chances of afterwards obtaining the means are exceedingly small. The branches of reading, writing, and arithmetic, are not local or special in their utility, but universal. No other branches can claim to be put on the same footing with them. They should occupy the first place in the teacher's estimation, and any others he may teach should exercise and interest his pupils in the application of these arts. Whether any other branches of knowledge should be introduced into school-study, is a question which resolves itself into this—Whether the teaching of these instruments can be regarded as a sufficiently educative process? If it cannot, the defect must be made good by using other subjects for that purpose; if it can, then, if other subjects are deemed necessary, it must be either because the discipline afforded by reading, writing, and arithmetic is in itself too narrow, or because the time at disposal in school admits of its being expanded.

67. Their Educative Value.—Now the study of the instrumentary branches may be made eminently an educative work. Language not only admits us to the thought of all time upon all subjects, but it is itself the product, the very image, of thought; manifesting principles and obeying laws in every aspect of it; so that, in tracing and applying its words, flexions, and propositions, the mind is tracing and applying principles in an endless variety of application. In this effort lies the power of mental discipline possessed by any subject. Considering how constantly the study of language demands this, and how steadily it rises in its demand up to the very end of the school-period, however long that may be, it may well lay claim to the first place amongst the means of education, as well as amongst the branches of instruction.

Number ranks next to language in its educative power. There

are certain first principles of constant application through the whole science; there are certain elementary operations in whose various combinations all its rules of procedure consist; and the circumstances in which these rules are applied are indefinitely various. This, as already observed, is the ideal of a disciplinary process.

Writing, as a branch of study, presents a double aspect. In the one, it appears as the complement of reading; as forming, along with that art, the means by which the study of language is carried on; and as therefore claiming to share in the educative importance of language in general. In the other, it appears as an art by itself; where it is taught, not mechanically, but as part of, and in connexion with, drawing, it may claim to share in the importance of that art as a means of educating the observation.

The instrumentary branches are thus not only of high educative value: they may justly claim the merit of being the branches, on the handling of which, above all others, the intellectual character of the school depends. It is not simply that each of them is educative; they are entitled, in addition, to the full credit of this consideration—and it is not small—that they are each of them educative in different ways. The discipline of which they are the means, is thus not merely powerful, but comprehensive. We conclude, then, that the position assigned to them in the school, from their use as instruments, is amply vindicated by their educative power. We assume, meanwhile, a rational mode of teaching them. We must refer forward to the part of this work which treats of method for the exhibition in detail of the proof which is here only stated in outline.

68. The Communication of 'Real' Knowledge as part of School Work.—If we regard the arts of reading, writing, and reckoning, not on their formal side alone, but also in their possible applications, their acquisition may be considered as the sum and substance of school-education; for these applications may be the means of conveying all necessary knowledge and discipline. But if we view them as pure instruments, their acquisition cannot claim to be so considered. The child requires to be furnished with real knowledge, as distinct from formal, to fit him for the intelligent discharge of his duties in life; his mind must, moreover, in order to be fully educated, be braced by the exercise which the acquisi-

tion of real knowledge involves. We have, therefore, to consider what are the departments of real knowledge to which his attention should be directed, and the appropriate channels of instruction. These are critical considerations for the welfare of the common school, second in importance only to that of the position due to the instrumentary branches.

The object of the common school being to prepare the child for a rational manhood and an enlightened citizenship, we may regard these supplementary branches of intellectual education as falling under two general heads: those with which an acquaintance is necessary to his personal wellbeing; and those with which some acquaintance becomes every citizen, and particularly every citizen of a free country.

69. The 'General Knowledge' appropriate to Early Years.—But the acquisition of any branch of real knowledge, no matter to what extent, if only it be systematic, implies a certain command over the faculties by which the acquisition is made. The pupil's first business, therefore, is to obtain the power of acquisition. This is no light matter; a considerable proportion of his entire school life will be required to bring his mind to the necessary facility and consistency of exertion. This explains the complexion of the knowledge which is first presented to him. It is so comprehensive, and yet so rudimentary, that we can give it no distinctive name. We can only indicate its nature approximately, in such phrases as, "general knowledge," "instruction in common things," and "object-lessons." Scientific order and completeness are here of no importance, for it is not science that is to be studied, nor the power of grappling with science that is to be developed. We choose freely from all the departments of real knowledge: the products of the soil, the animals of his own and other countries, the materials and the processes of art, the features of the landscape, the phenomena of the heavens, are all parts of the complex sum, chosen, not because an acquaintance with them is valuable in itself, though it is so, but because they afford the only means, at this stage of advancement, of drawing forth the pupil's sympathies with knowledge, and of awakening his powers of observation and comparison.

We do not need to wait till he has learned to read before we exercise him over this field. Years will elapse before he will

attain the fluency in that art which is necessary to its being the channel through which he acquires his knowledge. All that he reads, indeed, must be on such subjects, because no others have any interest for him, and he must gradually learn to use his reading as the instrument of acquisition. But his first knowledge, and his power of getting knowledge, are alike the result of oral instruction, and their efficiency will depend upon its amount and character.

70. **Knowledge necessary for the Welfare of the Individual —Laws of Health.**—For his usefulness and happiness as an individual, he ought to know the constitution of his own nature, bodily and spiritual. It is the business of physiology to instruct him in the organization of the body, and the conditions of its well-being. Health is the most valuable of earthly blessings, both in itself, and as a means to the discharge of all duties. It is, to a great extent, in his own keeping, being subject to laws of unfailing regularity, of which the knowledge is quite within his reach, but which he will never learn to obey either by accident or by instinct. He should not leave school without a familiar knowledge of the essentials of this subject, which shall enable him to struggle successfully with abounding ignorance and prejudice, to the benefit not only of himself and those immediately connected with him, but of the community at large.

71. **Knowledge of the Mind.**—It is the business of mental science to instruct him in the organization of his spiritual nature and the conditions of its wellbeing. He should know what his various mental activities are ; the design of his senses and the manner of using them ; the importance of the habit of attention, and the conditions of its effective exercise ; the qualities of a good memory, and the habits necessary for its acquisition ; the marks of a sound judgment, and the cautions to be observed with a view to just reasoning. He should not be ignorant, moreover, of his moral activities, and of the directions in which he should cultivate them ; of the instincts of his animal and rational nature, their uses, and the control to be exercised over them ; of the feelings to be cherished towards himself, his neighbour, and his God ; of the sanctions to virtuous conduct, both in this life and in the next.

72. **Social Knowledge.**—To this self-knowledge we may add

that knowledge of social duties with which, as a member of society, he ought to be furnished. His discharge of these will, no doubt, depend, in the first instance, on his general moral cultivation; he will faithfully serve or associate with others, if he has come to feel the obligations of morality on his own conscience. But some specific knowledge of social relations is required, over and above instruction in morals; otherwise, with the best intentions, he will be led astray by ignorance. It belongs to the science of social economy to give him an acquaintance with the conditions of organized labour, in virtue of which society works harmoniously to supply the wants of its various members; with the view of avoiding the disastrous consequences which attend their violations. Amongst the upper classes, this knowledge, in the precise forms in which it is required, will doubtless be obtained elsewhere; but in the case of the labouring population, who are the greatest sufferers from the want of it, it must be acquired in school, if it is to be acquired at all.[1]

73. Knowledge necessary for the welfare of the citizen—Geography.—To fit him for the duties of a citizen he ought to be instructed in the geography, history, and constitution of his own country.

The first of these subjects should inform him of its parts and population, and of the industrial interests essential to its welfare. This is the primary object of the study of geography in the common school; when that is attained, the position, appearance, character, productions, and industry of those countries which are in close relation with his own, may engage his attention. Without this amount of geographical knowledge, he cannot apprehend, or feel interest in, the current topics of conversation in every-day life.

74. History.—Co-ordinate in importance with the geography of his own country is its history: which will teach him what has been its past life, how its privileges have grown, what it has contributed through its institutions, and through its sons, to the advancement of the world; whilst it will exhibit to him for his imitation conspicuous examples of every public and private virtue. This subject may be extended in a corresponding manner to that of geography; so far as time permits, he should be made ac-

[1] "Report of Education Commission," pp. 127-134.

quainted with the most important events in the history of the nations related to his own, particularly of such as have influenced the history of his own country.

75. Civil Rights and Duties.—A third branch of knowledge must be ranked with these two, viz., the constitution and fundamental laws of his country; by an understanding of which he may feel an intelligent interest in its policy, and render an intelligent support to the maintenance of its liberties and influence. Moreover, every citizen should know the value of the civil rights he enjoys, that he may feel the more strongly the obligation of his civil duties. This instruction is by no means superseded by that general moral education which disposes a man to do his duty in all the aspects of life.

76. Channels for conveying Knowledge.—The common school has often incurred reproach in later times from the width of its professions; owing in every case, however, to the injudicious manner in which these professions have been made. The reproach would be well founded only if it pretended to teach, in a scientific manner, all the branches of knowledge upon which its course touches. But this is far from being its design. It must, indeed, impart a wide range of elementary knowledge, drawn from many sciences; but it keeps the whole in strict subordination to its instruction in the instrumentary branches. In short, the knowledge it imparts is no more than falls in the pupil's way, necessarily, we may say, in the application which he makes of the art of reading to the purpose for which he has learnt it.

It has been suggested that the reading-books used in school are sufficient to embody all the knowledge which the pupil needs; and in the peculiar circumstances of many schools, it would be difficult to dissent from that view.[1] But in ordinarily favourable circumstances, more may be easily and with advantage conveyed than the reading-book, however comprehensive, can contain. Hence the subjects of geography and history, which require more systematic and lengthened treatment than any of the other branches, are generally embodied in distinct text-books for separate study; in which case the danger of giving them an undue share of attention must be guarded against.

Apart from all the text-books used in school, the teacher has

[1] *Minutes of Council*, 1847, vol. i. Mr. Moseley's Report.

the resource of purely oral instruction. There is no period of school-life at which he will not find the use of this channel of instruction invaluable in supplementing book-instruction, either on points which the latter altogether omits, or which it treats with a meagreness disproportionate to their importance.

77. Knowledge required for the cultivation of Taste and Sentiment.—There are two branches of public instruction, more or less generally recognised, which still remain to be accounted for. The arts of drawing and singing are instrumentary in their character, like those of reading, writing, and reckoning; but they stand upon a different footing, in respect that they aim at providing means, not for intellectual discipline, or for the discharge of the ordinary business of life, but for the cultivation of taste and sentiment. These are parts of our nature as truly as intellect itself; capable, under judicious cultivation, of elevating its tone through the medium of pure and refreshing recreations, but certain, if ignored, to lower it by running out after such as are of a debasing sort. Education should fit a man for enjoyment as well as for work; both alike are instincts which must find their gratification, and it is difficult to say which has the more powerful influence on his general character. It is a truth too much neglected, that if it does not give him the taste for rational and elevating enjoyment, it leaves him to himself to choose those of a contrary tendency, which is simply to put into his hands an instrument to destroy its own work.

78. Drawing.—The design of drawing as a branch of public instruction is to educate the eye to the discrimination of form, and the hand to its reproduction; which carry along with them as an ultimate result a taste for beauty of form. Within this general design it attains two particular ones; it influences beneficially the study of the art of writing; and it will, in all probability, awaken in a few a degree of taste and technical skill which will determine the direction of their future avocations. On the whole, whilst it is both desirable and practicable to devote some attention to this subject, it may be regarded as an accomplishment rather than as a necessary part of the work of the common school, and is not to be compared with singing in respect to its influence on the tone of the public mind.

79. Singing.—The art of singing may well claim to be regarded

as an indispensable part of elementary public instruction. The first and strongest reason is the place which singing occupies in the services of public worship, and in the devotions of the school itself. But to this consideration we have to add another : it affords the means, beyond all other arts, of an elevating recreation for the people. Reading, of course, provides adequate recreation for the individual intellect and imagination ; the pleasures of singing are pre-eminently those of taste and sentiment, and they derive a peculiar influence from the manner in which, at the same time, they gratify the social instincts. It may be that society must learn to place a higher value on innocent pleasures of this nature, before it can expect a satisfactory measure of success to attend its efforts to elevate the tone of its lower classes.

CHAPTER VI.

CULTIVATION OF THE SENSES.

80. The Perceptive Faculty.—Observation is that exercise of mind by which we obtain our ideas of external objects. We may view it as comprising two parts, distinguished respectively as *perception* and *conception*.

The child's observation is, from his birth, attracted by things around him. What he observes in earliest infancy leaves no impression on his mind ; for he is not as yet conscious of any distinction between himself and the world without. This lowest form of observation, which is merely an animal act, bears the name of *sensation*, to distinguish it from the higher form of observation, of which we are now to speak. As he advances, he awakes to the consciousness, that what he observes is no part of himself, and that there is an existence without him, as well as an existence within him. His eye is fixed on an object which lies beside him. He puts forth his hand and grasps it ; or, in the attempt, he is restrained by the friendly voice of one watching over him. The consciousness of its separate existence, which only glimmered within him on the exercise of one sense, is confirmed

when he verifies the result of one sense (sight) by that of another (touch). At this point his intelligent constitution begins to operate; his mind is acting through his senses. This higher observation, which leaves a distinct impression on the observing mind, is called *Perception*. It is the child's first intellectual activity; the first process, accordingly, which we have to consider in speaking of intellectual education.

The perceptive faculty requires specific cultivation. This may be less obvious when the child receives his early education at home. The family education, when conducted with any intelligence, maintains him in a state of happiness and animal hilarity, and thereby secures his mental vivacity, and the consequent spontaneous exercise of his senses on the many objects which, in such circumstances, are within his reach; and its incidental conversations supply all the stimulus and guide to this exercise which he requires. But in the case of the child not so favourably placed, this faculty is apt to become sluggish and unreliable. It has little variety of objects to act upon, and, especially, it has less of the stimulus derived from conversation at home; hence it is apt to settle down into a dull and listless vacancy, and, wanting exercise, it will want reliableness. "If, with untrained sight, the child look at colours, he does not accurately distinguish them; if he see a number of forms—say lines on a board—he cannot tell their divergence from the straight; if he see a group of things together, he cannot make an approximate estimate of their number; if, with untrained hearing, he listen to an incorrectly-toned melody, he is not offended, nor does he derive the pleasure he is capable of doing from perfect tune." The object of the cultivation we have in view is, to substitute sensibility for sluggishness, and, through that quality, to impart trust-worthiness to the operations of the senses. Every one knows that, by repeated and constant practice, the senses, like any other faculty or habit, will, in obedience to a law of nature, attain a surprising degree of keenness. But we do not contemplate anything like a professional keenness of sense, which is valuable only for professional purposes, and is not required for general intellectual culture; and we would not act so as to lead the child to suppose that the development of perceptive consciousness is the only end of his education. Our object is, to implant sensibility or vivacity in

relation to things which daily pass under his notice; to give a habit of observation which shall take delight in its own exercise, and shall, therefore, of necessity act with a comparative degree of correctness. This outflow of mental vivacity, through the channels of observation, is the basis of all subsequent development of intelligence.

81. Mode of its cultivation.—The medium through which we observe is the five senses. These all contribute to our intellectual furniture, but not equally. The impressions made by taste and smell can with difficulty be recalled apart from the tasting or smelling which gives them: the images of objects dwell in our mind mainly as formed by the senses of sight, touch, and hearing. It would be necessary to remark, then, that, whilst we are to exercise the senses, we are to do this in proportion to their intellectual importance; were it not that the teacher finds himself kept from serious error by the very limits imposed on him by the resources at his disposal. The senses are to be cultivated by directing them, in the first instance, to the objects which each is fitted to observe. The sight is cultivated by seeing; for which end it must be made to observe light and colours, and their various shades, and those physical properties of bodies which it belongs to sight to discern, such as form, size, number, motion, and distance. The touch is cultivated by touching; for which end it must exercise itself on bodies to perceive those properties which touch reveals, such as weight, hardness, smoothness, toughness, elasticity, and heat. The sense of hearing grows in presence of the various kinds of sounds, such as high and low, loud and soft, sustained and broken, lively and plaintive; whether they be sounds of the voice in speaking, musical sounds, or the sounds of bodies in contact with each other. And similarly the senses of tasting and smelling are stimulated by distinguishing, through actual observation, the pleasant and the unpleasant, the sweet and the bitter, the salt, the acrid, and the like. The senses must be exercised to discern the several kinds of qualities; each sense acting for itself: qualities cognizable by one sense, *e.g.*, touch, must not be taken on trust on the testimony of another, such as sight.[1] The entire course of observation must be accompanied with suggestion, question, and information by the teacher.

[1] *Early and Infant School-Education*, Part II.

Mere sensation will not of itself lead to the result we aim at: a sense may continue sluggish where circumstances present the most abundant materials for its exercise. Some friendly guide must awake the slumbering curiosity by the incidental remark or query, and by manifesting interest in the results of observation. The teacher's duty is therefore twofold; he must present materials of sufficient variety to evoke the power of observation, for doing which he is so far dependent on the manner in which the school is supplied with suitable objects; and he must guide and notice the results of the pupil's observation, and turn these results into a stimulus to proceed further with the process.[1]

82. Conditions of its strength.—At this stage of education we have nothing to do with order, completeness, or reflectiveness in observation. The higher attributes of intellectual action are not at the child's command; he is but gathering in the first rudiments of knowledge, to be afterwards arranged and elaborated by a more advanced state of intelligence. The quality which it is desirable to see in perception is intensity or depth of impression. How are we to promote this? only in an indirect way. The lower the mode of intelligence with which we deal, the less direct is the assistance which we can give the pupil: the nature of the result, in the present case, depends primarily on the character of his animal constitution. It holds as a rule, as we shall see more fully further on, that the manifestation of any one phase of intelligence varies in force with the degree of development of those which underlie it. In this case, we have only sensation to look to for aid, which is an animal, rather than an intellectual, power; it is the medium of perception, and we must enlist its services to strengthen the acts of that faculty. If, therefore, by our own vivacity and flow of animal spirits, we can bring the pupil into a similar state of sensational pleasure and excitement, the deeper will be the impression made by his perceptions. We may estimate our success by the degree of wonder and interest which we perceive to be exhibited on the child's countenance during instruction. Words are of little assistance in aiding this exercise; they are symbols, whereas we are only striving to make the child feel the reality of the things they signify. We may give an object or a quality its name; but his perception of

[1] *American Journal of Education for* 1856—"Cultivation of Perceptive Faculties."

a running stream, or of a sunset-tint upon the cloud, may nevertheless be very different from ours. And if words do not give him his impression, they should not be taken as the measure of it. A child cannot express all he feels; at which we should be less surprised, since an adult, with all his experience and habit of observing, cannot always do this. The teacher's art, therefore, does not consist merely in clearness of exposition or in frequency of repetition *at this period*, but mainly in the depth of *emotion*, of which he can make the child conscious in the act of perception; and the surest test of his success is the unsolicited observation by the pupil of the qualities of things which may not be the immediate subject of lesson, or which may not be in school at all. This spontaneous exercise he should gladly encourage.

83. The Conceptive Faculty.—By perception we recognise objects when they are presented to the senses, as having a separate existence, and as displaying various qualities. The next step in the mind's action is to *take off* from any object perceived an impression which may remain with it when the object is absent, and by which we may recognise the object when it comes under our notice again. This it does by distinguishing those features which are essential to the object, and combining them into a whole; dismissing those which, being accidental, vary with different specimens. This image the mind may construct from one specimen, or from more than one. Thus of 'tree,' the image is 'trunk and branches,' rooted in the ground; of 'table,' 'flat surface and legs;' in both cases, the mind tacitly dismisses such considerations as the particular size of the tree, and the form of leaves, or the colour and peculiar shape of the table, and rests in the combination of the essential features, as giving an image by which it will recognise all trees and tables in time to come. The mind, in fact, takes a likeness of the object for its own possession; and the object itself is therefore free to go. But that likeness, once in possession, serves to identify the object again; and, moreover, for the mind's future use, it serves the purpose of the object itself. This is a step evidently very much in advance of perception. If the mind were not thus to take stock of its perceptions, and create an internal world the counterpart of that without, it must always remain in a state of intellectual infancy; it could think and speak of nothing but what it may happen to be at the moment

looking at; every fresh perception would be a new cause of wonder; there could be no comparison and no classification: in short, no experience of things would make us any wiser. Conception, or, in common language, the formation of ideas, removes all these obstacles to knowledge and progress.

84. Attention.—Clear and vivid conception implies not only intensity, but continuousness in the exercise of the perception on which it is founded; in other words, attention. It is not so much on the element of time—though this is very important—that the efficiency of attention depends, as on the degree in which the mind concentrates itself on the object during that time. Hence the necessity to exclude from the mind the flitting trains of images that would distract it, so that it may turn its undivided energy upon the object before it. Attention is, in a certain aspect of it, natural to the child, as we see when anything happens to strike his fancy. This is a mere instinct, however, and, as such, fitful and unreliable. The attention we have in view must be a conscious and voluntary concentration of mind; a state into which the mind can put itself at any instant, which it can maintain against its natural volatility, leading it to be satisfied with superficial and transient glimpses of things, and which it can readily transfer from one thing to another without dissipation of thought in the transfer. To establish the power of attention is the first trying effort both for pupil and teacher; but it is of very great importance to establish it, since on it will depend whether subsequent mental activity shall be characterized by a steady persevering habit of thought which may lead to the fulness of knowledge, or by that inconstancy of application which is incompatible with any real progress. Without this quality, even natural acuteness will accomplish little.

85. Means of cultivating Attention.—We cannot secure attention by mere compulsion. The child has not the power to render, upon compulsion, the kind of attention we wish, to whatever extent we compel him to put on the appearance of it. We must gain consent to the effort by suitable motives, and work with the law of habit to strengthen the power. The motives on which we must rely for establishing attention are mainly these: curiosity, love of activity, and sympathy. *Curiosity* exists in every breast, and may be very strongly excited; it is gratified by the imparting

of information on topics, and in a manner, suited to the child's capacity. The teacher who speaks to the intelligence of his pupils, and interests their feelings, has no difficulty in fixing their attention. Nothing which excites the wonder or kindles the delight of children is soon lost by them. *Love of activity* is another motive which will sustain the child in the act of attention. He is disposed equally to mental and to manual activity. The teacher should, therefore, not condemn him to be a passive listener under instruction, but exercise his mind on its subject. He should likewise appeal to the pupil's constructive power of hand, the exercise of which is always grateful. *Sympathy* is another guarantee for attention; which will exist in the pupil in proportion to the kind and degree of personal ascendency which the teacher has obtained. If this be well established, the child will make great efforts to enter into the work of the teacher, both from his instinct of imitation, and the happiness he derives from sympathy. In such case, what the one is interested in, will just be what the other is; so completely does the child enter into the mind of the teacher, that he eagerly tries to anticipate the line of action which he feels the teacher is going to follow. Hence the importance of genuine, hearty, interest in work, as manifested by the teacher; it fixes attention without almost the consciousness to either party that there is effort being exerted. "There is nothing," says Madame Necker, "so likely to excite these tastes as possessing them ourselves, and associating the child with us in the pleasure we receive from them. The idea that we are constantly occupied about him may excite his gratitude, but will not determine the direction of his inclinations. But if children see that our interest is awakened, and our curiosity excited by the idea of making some new observation, or ascertaining some new fact, they will soon try to anticipate our discoveries. If they observe us interested in the cultivation of flowers, in watching the labours of the bee, or the metamorphoses of insects, they will soon be delighted with these occupations. Example, emulation, curiosity, the most natural stimulants at an age when pleasure is so vividly enjoyed, and the idea of utility so indistinct, will all act in unison."[1] In mentioning the motives of curiosity and sympathy as those which tend to excite the attention of the child, we do not forget

[1] Necker's *Progressive Education*, book iii. chap i.

that the weakness and volatility of his nature require them to be sustained by other more palpable external motives. Thus, though we cannot compel his attention by force alone, the gentle pressure of authority requires to be present, and to manifest itself occasionally under all the motives we have named, during those moments of humour in which he is not subject to ordinary motives. And so our pleasure or our displeasure may be exhibited in praise or blame under certain limits of the same kind. Great danger would, however, be incurred by giving too great prominence to these stimulants; we may fix the child's thoughts on them, and by that very act divert him from the effort we hold them out to procure.

The power of attention is the result of habit; time must therefore be allowed for its growth. The first efforts exacted from the child should be gentle; one point should be presented at a time, that he may not be bewildered by multiplicity; the strain on his attention should not be long continued; he should be relieved before he is compelled to desist from fatigue; one success will make a subsequent one easier of attainment; failure will make the next attempt more arduous.

All children are not drawn alike to the same subject; some attend more readily to one, some to another. The teacher will find his advantage in availing himself of these mental affinities to establish the habit of attention. The child should be first appealed to on those subjects, or on those aspects of subjects, to which he may incline. When he has learned attention in these, it will be less difficult to gain for other subjects. The same progress in this habit must not be looked for from all the pupils, least of all within a given time. One who is of slow mental action may reach the mark much in arrear of his neighbour who is of a more active temper of mind. Individual differences must be allowed for in the mental discipline of school.

Attention requires clear and unwavering exposition of the points to be attended to, but also a certain amount of quiet contemplation. The fruit of attention must, therefore, not be demanded simultaneously with the effort put forth. The teacher not unfrequently offers the aid of additional exposition where time alone is wanted; but verbiage only interferes with the result of the effort. The success of attention may be read in the child's

countenance; for which purpose the teacher should be very observant. Where the end is gained, let him ply the pupil no more, but reserve the result for subsequent repetition. Where the countenance shows trouble, as it often does, let him relieve it by removing impressions of his displeasure, and let him give further assistance, if expedient at the time. Finally, patience is a prime requisite in cultivating attention. What is self-evident to us is not always so to children. Often, indeed, it seems self-evident to us, while it is the result of reasoning long forgotten. Let us have patience, then; to scold indiscriminately is irrational, for the question is one of ability with the child, and it defeats its own object, for it fills the minds of children with strong fears, which drive away all the calmness needed for attention, and make it impossible. A child will often falsely say that he perceives a thing, after he has seemed to attend under such pressure, merely to avoid unpleasant consequences.

86. Obstacles to Attention.—The teacher should not measure all temperaments by the same standard, and have but one set of appliances to be blindly applied in all cases. If he set out with the idea that the will alone is wanting, and that all inattention is a fault, he will be led into many grievous errors: children cannot bring to the commencement of their education a power which education must give them. When he observes inattention, he should regard it as a symptom of some defective mental activity. His success in implanting attention will depend on the penetration with which he searches out the various defects from which it results, and the skill with which he adapts his appliances to remedy them. The causes of inattention are chiefly the following:—Weakness of bodily constitution need only be noticed: this is easily detected. The teacher ought, if he has to deal with such a case at all, to be very gentle in his requirements.—Timidity takes away a pupil's power of attention. He shrinks from the bustle around him, and feels that he never can attain the results which he sees others of a more forward temper attaining. The teacher must deal gently and encouragingly with such an one, not leaving him unnoticed, which will confirm him in inattention; but, taking him by the hand, sustaining him in some efforts till he reaches a successful issue, and thus proving to him that he has the power of which he dreads the absence. Success is his best stimulus.—Others are

inattentive from vivacity. Quick in mental action, they know they are so; they perceive the point of the lesson before others, and think that their cleverness enables them to dispense with attention; so that, whilst others are striving laboriously to reach the point which they have gained at a bound, they engage themselves with fancies, it may be connected with the lesson, or remote from it. The teacher may, perhaps, think that such pupils do not need to be drilled into attention like the rest, since they attain the results, as it were, by intuition. But this is an erroneous view, for their quickness will never attain permanently valuable results till it is put in the harness of attention. The teacher should frequently bring them to the point by questioning, and, when necessary, push it to a degree which shall expose the hollowness of their pretensions; taking their cleverness as a matter of course, and reserving his praise for those who show steady attention. This moral treatment is peculiarly required when forwardness or presumption is associated with quickness.—Another cause of inattention is sluggishness of temperament. The urgent appeal and vivacity of dealing, which would overwhelm those who are inattentive from timidity, are the instruments which should be used to arouse the sluggish. The general secret of success in dealing with them is to find out the specialty to which they are attached, for it is very seldom that there is not some direction in which their love of activity exhibits itself; if not in one lesson, in another; if not in one kind of exercise, then in another; if not in mental work, then in manual; if not in study, then in some species of recreation. The teacher must cast about till he finds the subject which attracts them. No case perplexes a teacher more than that in which a pupil seems stolidly indifferent to all the ordinary engagements and motives of children; as if there was a deficiency of vital force, which nothing can make good.—Finally, if acuteness of observation is needed to discern these defects and their remedies, it is not less needed to discern the changes that frequently come over the mental tempers of children as they advance in years. Every observant teacher has marked with surprise such revolutions of character in particular pupils: how the timid becomes quietly persistent and confident; the vivacious is toned down to steady consecutiveness; and the sluggish is stirred up to the disclosure

of solid ability. He must be prepared both to strive for the dispersion of the cloud which, perhaps, temporarily hangs over the mental landscape, and not less so to change his measures when the landscape is revealed by the passing away of the cloud. This is quite incompatible with the injurious practice of setting down a pupil definitively as of such and such a character, and disbelieving that he can ever become anything else; a most energetic means of discouraging him from making the attempt.[1]

87. Cultivation of the Conceptive Faculty.—The qualities which we seek to impart to the conceptive faculty are versatility, strength, and precision. To give it *versatility*, we must accustom it to work over a wide range of objects, that it may feel at home in various spheres of observation. To give it *strength*, we must rely on fixity of attention, and, therefore, on the motives by which we seek to establish attention; all that we attain in educating the one bears upon the other. As natural force of perception is not alike in all, so neither is strength of conception. Some take hold of their impressions with a firmness which retains them permanently and freshly; a most valuable quality, and one which education can do something to promote in those who are not originally endowed with it. The third quality is *precision*, which requires a further educational process for its development. It implies a discrimination of the essential features of an object from the accidental; that is, it implies some degree of the higher mental acts of abstraction and of comparison, and, if we look at its later form, we shall be obliged to say of reasoning also.[2]

In the earliest conception, the comparison is altogether latent. We have not the means of influencing it, as is clear from the fact that the child of a few months old has conceptions; conceptions which may not be complete or logical, but which serve his purpose. In cultivating this faculty, we must present objects to the

[1] Edgeworth's *Essays on Practical Education*, vol. i. chap. 3.

[2] Here we may observe that, in speaking of the several faculties or modes of intelligence, we are not to view them as so many separate instruments or members of the mind, existing apart in themselves, like the members of the body. In each of its mental acts, the whole mind acts with its whole intelligence. Thus we may find comparison latent even in perception, and we see it manifestly in conception; while, on the other hand, in comparison and reasoning, we see the action of the elementary modes of intelligence. What we designate as the mental faculties are complex activities, which take their names respectively from the most predominant among their constituent modes of intelligence. We are free, therefore, to speak of perception and conception as faculties of observation, though the higher intelligence of relation appear along with them; their primary function being to present us with ideas.

mind in such a way that their main features shall be suggested by the mode of presentation; we must indicate the circumstances, a consideration of which will lead to these; we must present more specimens than one, of which the conjoint perception may more plainly suggest them, and thus draw out the mind's latent power of conception into the habit of conscious and ready discrimination.

Finally, we are to keep in view that whilst in conception the mind has idealized the external world, and has images of its parts for production or recontemplation when desired, there is still one step wanting before it can safely store away its conceptions with the certainty of being able to find them when wanted, and that is, that it should clothe them in words. A word is the sign of a conception.

88. Conception as cultivated in Connexion with Language.—The cultivation of the conceptive faculty commences with, and is carried on for some time exclusively through, the perception of visible objects, to which the child is accustomed to associate names, when they have impressed themselves on his mind. The first course of this faculty is from things to their names. We can in this way extend the range of the child's conceptions widely, give him a large vocabulary, and, in particular, exhibit to him in a practical way the manner in which language is formed, and its relation to thought. As he advances, the number of objects claiming his attention increases, yet it is but a small portion of possible and necessary conceptions which can be brought to his notice, in the first instance, through the objects themselves. How trifling the range of his conceptions compared with that of the adult, and how trifling that, again, compared with the highly developed conception of the professional man, the man of science, or the poet! Their opportunities of minuter observation, the progress of their analysis of nature, or their keen sensibility, leads them respectively to observe in all things properties which the common observer, much more the child, would never think of; and therefore gives them a vocabulary indefinitely more comprehensive and analytic. Every professional plan, scientific description, or poetical picture we read, may convince us of this. The language of a people or class of people is the tide-mark of their conceptions; poor or rich as these are meagre or full. It is not merely the instrument of their thought, but its image and record;

and the analysis of their vocabulary will introduce us to the whole compass of their ideas. It indicates the conceptions which have been found useful or necessary by men in general; and thus it sufficiently indicates the ground we should occupy in our culture of this faculty. Thousands of conceptions are embodied in language which the pupil or adult would never attain to, but for the fact that he meets with the words denoting them, though these are conceptions of familiar things which are fairly within his reach. We may take, as an example, the conceptions embodied in the series of descriptive terms applicable to the leaf, the tree, or the cloud. It is the occurrence of the terms that suggests the examination of the conceptions themselves, and the words will remain unintelligible, till the conceptions which they signify are traced. Thus it is that the conceptive faculty finds the means of training, not only in passing on from things to their names, but in passing back from names to the things they denote; and thus it is that the illustration of words is so much insisted on in practical teaching, in contradistinction to the practice of merely giving synonymous words, which may require illustration as much as the words they are given for. Not one class of words only is thus suggestive; the names of things, acts, and circumstances of time and place, which find expression in nouns, verbs, and adverbs, are all as valuable as those of descriptive epithets, denoted by the adjective. The possible classifications of words are so numerous that we can find exercise of this nature suitable for all stages of the pupil's progress. The words which denote the properties of things cognizable by the senses, would alone furnish sufficient occupation for younger classes. These might be subdivided, and subdivided again, as pupils advance, not to speak of that part of the vocabulary used in secondary or abstract senses, which remains to be explored. This kind of exercise, though it deals with words, is not merely verbal. If carried on within proper limits, it is in many ways beneficial. The vivid apprehension which it aims at giving of the words of a language will bear fruit in every subsequent department of study without exception, and, what is more to our present purpose, it serves, in an eminent degree, to cultivate the conceptive intelligence.[1]

[1] Locke's *Essay on the Human Understanding*, book iii. "On words;" and Taylor's *Home Education*, chap. x

89. Errors in Early Culture.—Childhood being the season when the perceptive faculty shows itself in freshness and vigour, it may seem unnecessary to remark, that childhood must also be the season for stimulating intelligent observation. This, indeed, should be eminently the work of early education. Nature's own intentions are made sufficiently obvious in giving to the child a large measure of activity in this faculty, and in holding others in comparative abeyance; and, if we interpret rightly the hints she has scattered so profusely over child life, we shall look on childhood itself as earnestly struggling for the development of this power. The error has been very generally committed, however, of overlooking this mode of intelligence in the child, and proceeding at once with the higher modes of abstraction and definition. The manner in which the two typical subjects of school instruction, language and number, have been taught, may be referred to to establish this fact. In the case of language, the error committed has shown itself in multifarious forms. The assumption constantly made that the child must understand all the words which the teacher uses without illustration, is the vital and fundamental form of the error. Again, the exclusive employment of language as the material of education at first must be a mistake, if, as we have seen, it is not the first mental instinct of man, but only a growth out of his conceptive faculty. Again, the mode in which reading has been pushed on is an error. It has been assumed that the moment the child comes to school, his first and last business is to take book in hand, and make his way through it. But there is in its abstract and unmeaning characters no room for the exercise of the perception, which is the child's only mental instrument at the time. Reading, then, should not be commenced till some progress has been made in other exercises to which he takes more naturally. Again, the error shows itself in the stress laid upon the child's committing to memory largely, without regard to his understanding of what the words express. The same error is apparent in what has been the prevalent manner of dealing with number; according to which the child was at once introduced to the signs of number, without any suspicion of the necessity of enlightening his conception as to the value of numbers themselves, and the nature of numerical operations, by ocular demonstration. This inveterate error, due to the want of

scientific basis for education, and fostered by the scholastic notion of a thousand years' growth, as to the identity between education and knowledge of books—partly, also, by the fallacy prevalent as to the freshness of the child's mechanical memory, and the supposed necessity for working with that in a mechanical way (a fallacy to be referred to by-and-bye)—has acted with pernicious effect; and all the more by how much the tendency has increased of sending children earlier to school. Its bad effects on education are too manifest. It is not as if there were two alternatives to choose between, viz., a good training of the observation upon natural objects, and a good use of language; these are not to be contrasted, but regarded as parts of one organic whole. Without cultivation of the observation, language must be apprehended with a feeble grasp: its words will be but shadows, neither bringing to us, nor taking from us, any of that richness and depth of colouring in which alone their impressive power lies; it will, accordingly, be deprived of much of its efficiency as an instrument for the subsequent cultivation of the reason.

90. The Higher Exercise of the Observing Faculties.—We speak of perception and conception as requiring cultivation in early years, and then of judgment and reason as following afterwards. It is not to be supposed, however, that when we have specially in view the exercise of the conceptive faculty, we have done with the perceptive; or that, when we are chiefly engaged in the education of the reason, we have no further concern with the perceptive and conceptive modes of intelligence. The mind grows up through these modes, not in succession merely, but cumulatively, any one which is developed remaining in permanent operation in connexion with, and enlightened by, those of later growth. Thus the order of modes indicates not only the general historic development of the mind's intelligence during life, but also the manner in which its application must be directed to particular subjects of study, whether in later or earlier years. The pupil in an advanced class who enters on the study of natural science or of geometry is bound by educative laws to commence with observation before he can proceed with reasoning. The man of science bases his generalization on his observation; he preserves, and must preserve, this mode of mental activity so long as he has any fresh field of knowledge to explore. The observation of the

child is, indeed, very different from that of the man : that of the child is the observation of perception, that of the man of reason ; that of the child is prompted by sensational impulses, whilst that of the man is directed by the forms of the understanding, elaborated by long experience and reflection. Conception rises from mere latent comparison, to involve the exercise of the logical faculty of judgment in its several steps of comparison, reflection, abstraction, generalization, and reasoning. And thus observation advances from the perception of facts to the apprehension of the laws by which they are bound together. As the process is higher, so is the motive different. Sensational pleasures, largely appealed to with the child, are now of no influence ; the exercise of the needed attention rests on the sure basis of intellectual power and deliberate will, stimulated by the love of knowledge for its own sake. The application of all this for the elementary teacher may shortly be stated as this, that in childhood he must establish the habit of observation ; that he must then do it by help of such motives as childhood is open to ; that this observation, once developed, is never to be allowed to rest, but to be appealed to constantly as a necessary thing in all subsequent stages of study ; that increased power and penetration of observation are to be looked for as reason grows, and as childhood is accustomed to reflection ; that accordingly room should be given for this higher exercise of it in school-study ; and that the lower sensational motives are gradually to be departed from with the progress of the child's intellectual and moral power. In a word, as he has an observation to cultivate which is antecedent and subservient to reason, so he has an aspect of it to cultivate which reason in turn directs.[1]

CHAPTER VII.

IMAGINATION AND MEMORY.

91. Province of Imagination.—Wide as is the field of knowledge surveyed by the observation, there is a wider of which that

[1] Thomson's *Outline of the Laws of Thought*, sects. 10, 48, 49. Morell's *Elements of Psychology*, chap. vi. sect. 3.

faculty does not give us even a glimpse. The objects which constitute the furniture of our own district or country are at hand for inspection, and many that are peculiar to other lands may be brought to us ; the incidents of the social life amidst which we move, are likewise familiar to us from personal experience. But there remain the wide fields of nature which stretch away beyond the reach of our observation, and the incidents in the life of man in other times and countries than our own ; of these we can form no idea, except through the exercise of another faculty having the power of observing ideal objects. This is the imagination, a faculty to be regarded as the complement of the observation : the latter enabling us to construct an ideal world of what we see, the former an ideal world of what we do not see. Imagination implies the pre-existence of observation ; as it designs to set before the mind scenes resembling, or analogous to, those on which the observation has been exercised, so it uses the materials which observation supplies, and combines them in new arrangements. As a mode of intelligence it ranks with conception, of which it is, indeed, a form ; in the same way, and to the same degree, it implies the elements of abstraction and comparison. By the known only do we grasp the unknown ; so, when imagination endeavours to embody its peculiar scenes, its starting-point must be from some scene which has passed under the observation ; re-arranging, and, it may be, magnifying the elements, but at every step tacitly referring to the scene which is the basis of its action.

The education of this faculty has been much neglected : yet it is a noble faculty, and necessary not less to intellectual than to moral education. It furnishes us with knowledge otherwise unattainable ; it gives life, interest, and authority to the action of the understanding by the rich illustration which it suggests ; and by its power of setting before us scenes of other lands and distant times, past or future, it provides nourishment for the moral and spiritual nature. Whilst, over all, it is a constant source of happiness by the pleasant images with which it fills the mind. A faculty so useful, and of whose existence the life of childhood offers so many proofs, cannot judiciously be overlooked.

92. Field for its Exercise.—Observation is limited by very narrow boundaries of space and time ; to whatever extent we pass

these, it must be on the wings of imagination. Accordingly, as already implied, descriptions of natural scenery, and scenes from life, real or ideal, are the field in which this mode of intelligence must be exercised ; and both are very rich in materials. When the pupil has observed the elements of the landscape at home, he is required to carry these abroad, and, by modification, interchange, and amplification, to construct another landscape there ; the hill, rivulet, meadow, and wood of his native district become the snow-clad peak or volcano, the mighty river, the far-spreading desert or cultivated plain, the trackless forests of other lands ; from the summer's heat and the winter's ice, whose effects he observes at home, he passes to the heat of tropical, and the cold of arctic, regions, with the luxuriant vegetation of the one, and the stunted growth of the other ; the plants and animals of his own country, with their interesting habits, serve as a standard by which he may estimate their representatives in other countries ; and the notions of the adaptation of labour, and of the modes of life, which he forms from what he sees around him, are drawn upon to construct pictures of the industry and the habits of other races of his fellow-men. Then it is largely by the imagination that a knowledge of life is gained, whether of individuals or communities. The life of home or of school, and the life of society so far as the child sees it, are limited in their incidents ; yet the teacher hesitates not to tell or read the story of human life, in its various spheres and with its diversified enjoyments, in the belief that the pupil's experience, narrow as it may be, will enable him to realize the emotions portrayed, and gather up the lessons suggested. Biography and history are the natural sources of supply for materials of this sort ; narratives of adventure by sea or land ; descriptions of manners and customs ; incidents in the life of men or societies which embody the virtuous emotions of our nature. Ideal life may come in to increase the store of materials ; it is equally rich in instruction with the life recorded in history itself. If the mention of ideal life suggest to any the fear of giving an undue stimulus to the youthful imagination in this direction, it should be remembered that it is not the delineation of ideal life that is to be feared, where true to nature, but the delineation of life in which the sentiments are ambiguous in character, or morbid in action ; that life of this sort is unfolded in

the pages of history, as well as of fiction ; that the over-indulgence of the imagination in after years is to be dreaded rather as a consequence of, and reaction against, the neglect of a natural faculty at the proper time for its education ; and that wholesome exercise, duly regulated, is the only guarantee against the subsequent misdirection of this as of all our other powers.

93. Mode of its Cultivation.—The instruments available for the exercise of the child's imagination are two, language and pictorial illustration. On the character of the *language* used in clothing the scenes described, and on the degree of his familiarity with it, depend the facility and success with which his imagination will apprehend them. If he has been trained to forcible perception, and to full and accurate conceptions, the words employed in the description will be the more significant for him, and will set forth the objects described in more distinct and brilliant colours. Then the whole arrangement of the words should be graphic ; a term implying that the most striking features of the scene are selected, and depicted in language which does not intercept or confuse their natural impressiveness : the more transparent the medium, the clearer the mental perception. And the illustration drawn from comparison with things which have come under the observation, should be clear and interesting. As to the plan of the description, it is obviously expedient that it should seek to give the pupil a general outline of the object or scene before descending to minute characteristics ; if details be presented first, the mind is apt to lose itself from the want of some plan in which to give them their appropriate place. When the imagination is appealed to through *pictorial illustration* — which it should largely be with children—both the character of the illustration and the mode of using it deserve notice. It is only with adults that elaboration of details and artistic finish need be aimed at ; to interpret a complex picture requires the same advancement and control of intelligence as the understanding of a discourse or poem, and is therefore beyond the reach of children. The picture should not contain much ; but the figures upon it should be accurate, and, especially, drawn with spirit. It is these features alone which will lay hold of the pupil's imagination, and set it a-working to realize the scene ; we can, therefore, afford to sacrifice to them minuteness of shading and gaudiness of colour.

When language and pictures are combined to stimulate the imagination—which they are in the general case—it is a judicious course to keep back the picture for some time. As it gives the keener stimulus of the two, its presentation at the outset will so pre-occupy the pupil's mind, as to unfit him for interpreting the language that is to accompany. Whereas, if the description is given first, he will strive to follow it, and the picture, when it is brought forth, will serve its real purpose of testing the faculty which has already exerted itself, by enabling him to compare the result of his imagination with the image of the object. This use of pictorial illustration will accustom him to the more correct interpretation of description by language. Whilst the teacher is conducting the description, whether it be oral or pictorial, he should secure the co-operation of the pupils in the construction of the scene, by allowing them to fill in those touches for which they are competent.

Imagination, being a species of conception, will, like it, depend for success mainly on the strength of the emotion and mental activity infused into it. If the teacher cannot, therefore, throw himself into his subject so as to excite his pupils' curiosity, and carry them along with him by force of the sympathy with which he inspires them, he is deficient in the qualities required in one who undertakes the cultivation of this faculty.

To lay before the pupil discourse suitable for exercising the imagination, we must look on the one hand to the teacher's oral description, of which the outward form should be clearness and vividness, and the inward animating spirit should be emotion; and to the reading-books used in schools. Whilst these should have passages, of which the recommendation is clearness, order, and connexion, to exercise the intellect, they should also have passages orderly and connected, indeed, yet in which exposition is not the final aim, so much as impression by appeal to the reader's sympathy with what is grand, beautiful, or touching. It is the special province of poetry to evoke these sympathies; poetry, therefore, should largely be read and committed to memory. But the prose set before children should not be wholly given up to the purposes of pure intellection.

94. Imagination, earlier and later.—The imagination is a mode of intelligence which is very active at an early period; the idea-

lity of the child being patent to all who observe his engagements. But it should continue active amidst all the subsequent development of his intellectual character. There is ample room for its activity in various parts of the school course, as will appear more fully in the chapter on Method ; it will suffice here to say, that in geography and history little of the fruits of knowledge can be gathered in without it. The traveller may go to distant lands, and there see with his eyes the wonders of nature ; if we are to be delighted with these at all, we must bring them before ourselves from his descriptions by the effort of our imagination. The great characters and the important facts of history are embalmed in the pages of the historian : it is for us to bring them to life again, to accompany them in their daily work, to see them at their great labours, by imagination. Thus the more maturely we consider the function of this faculty, the more clearly shall its practical importance in life, and therefore in education, appear.

There is a higher form of imagination than the merely conceptive, which we have just considered, viz., the creative or poetic. This has rarely time to show itself to any extent within the limits of school-study ; so that we need not consider the special means for its culture. To whatever extent that can be given in school, it must be based on the culture of the conceptive or appreciative imagination ; we must follow before we can lead ; we must apprehend before we can construct. The opportunities which we give the pupil to aid in constructing the pictures we set before him by our suggestive questioning—and these should be more and more as he grows up—may be thought to contribute to the stimulating of the creative imagination, though they are less given with that view than to secure and test the activity of the conceptive. Imaginative exercises in writing, proceeding wholly from the pupil, and designed to exercise his invention, hardly fall within the province of the common school.[1]

MEMORY.

95. Memory and its qualities.—Memory is that mode of intelligence by which we retain and recall the ideas we have formed. If it is by the conceptive faculty that the mind so organizes its per-

[1] Necker's *Progressive Education*, vol. ii. chap. 8 ; *Home Education*, chap. ix.

ceptions as to be able to apprehend them apart from the external world which is their object, and thus renders their accumulation possible, it is by memory that the accumulation is actually made; thus the two are necessary to each other. Without memory, the fruits of conception and of imagination would go to waste; there might be constant mental exercise, but there could be no progress. It not only presents the reason with materials for its exercise; the very fulness of its treasures solicits, and in a manner compels, the action of the higher faculty, with a view to their arrangement and utility.

Memory is efficient according to the accuracy with which it retains ideas, and the readiness with which it reproduces them when they are wanted; the former being the primary quality, and a means to the latter. We principally aim, therefore, at imparting to it the quality of *fidelity*, in virtue of which it renders up the impression both without diminution from forgetfulness, and without alteration from imagination; and *tenacity*, in virtue of which it retains what is committed to it, independent of the lapse of time. *Readiness* is a quality of much value; often, indeed, the retention of the idea will be of little service to us, if we cannot lay hands on it at the moment we wish to recall it. But it is subordinate in importance to those already mentioned, and may be held as sufficiently provided for by the means employed to secure them. There is another quality of memory to be distinguished—*facility*, in virtue of which the mind makes its acquisitions quickly. Certainly the more quickly the memory can gathers its stores the better; but this is a feature of its action of no value apart from fidelity, and requires no separate cultivation. In some situations, that form of memory, in which the mind readily takes superficial impressions of great extent, which are not designed to be part of its permanent possession, is not without its advantage; but it cannot be considered as one of the ends of education.

96. Cultivation of Memory.—The action of the memory, as a faculty of reproduction, must depend upon that of the underlying faculties of acquisition. The greater the force of the observation and the imagination, therefore, the firmer will be our hold of the ideas we acquire by them; the stricter will be the fidelity, and the stronger the tenacity, of the memory. All that we do for

the cultivation of the former, bears in the most direct way on the cultivation of the latter. This, a fundamental law for the cultivation of the memory, is apt to be overlooked, and the temptation is particularly strong, according to the common way of looking at the mind as consisting of so many separate faculties. The almost inevitable consequence is to view the memory as concerned only with words, and thus to reduce it to the condition of a mechanical power. The elementary branches of instruction, as has already been observed, have been largely treated, as if the observation and imagination of the pupil had no share in the acquisition of them, or, indeed, were not modes of intelligence at all: by way of compensation, they have largely, often exclusively, appealed to the memory with words and abstract statements. But such exercise of the memory is false and unwholesome; in the degree in which a process is merely *memoriter*, in the popular sense of that term, it makes no account of what constitutes the real life and strength of the faculty of memory. There is, as we shall see, a memory of words; but the primary office of it is to retain our impression of things, and its primary cultivation is therefore dependent on the way in which we exercise it upon these. The several conceptive faculties (for so we may term all the faculties that have been named) cannot be really educated out of their natural relations to each other.

But whilst the cultivation of the conception and imagination are essential to the cultivation of the memory, it does not constitute the whole of that cultivation. Impressions of objects, however much they strike us at the time, are apt, by a natural law, to weaken by disuse, till they either sink into entire oblivion, or become so blurred and defective as to be useless for any practical purpose. To keep them fresh, they must be recalled with more or less frequency. We have here a law of the cultivation of memory co-ordinate with the former, that there must be review of the ideas already acquired by us to fix them permanently in our possession; in other words, all study requires deliberate revisal. But the review does not need to be exclusively in the exact form of the first acquisition, either as to order or as to completeness. With respect to order, it will generally be found that the repetition which is accidental, and which calls up the idea from a different point of view from that from which we first ac-

quired it, is the more effectual; whilst, as to completeness, those ideas alone, which have become dim, need to be reimpressed. Those which the application of a test shows to remain with us, need no further repetition than that which the test itself supplies; what we can clearly render forth, after the lapse of some time, will generally be found to be, by that rendering, placed beyond the need of further special reimpression.

97. Recollection.—Since it is on the basis of the observation that memory is exercised, there are as many different instruments by which memory may be cultivated as there are channels of observation; sight, touch, hearing, taste, smell. Our ideas, however, when finally put into form for the mind's use, are attached to words as their names or signs, and are, for the most part, ultimately recalled through these. We have seen how wide a field for the exercise of the conceptive faculty is opened up in language; it is the same with memory. Practically the word and the idea come to be inseparable, so that we have only a faint and painful glimmering of the idea when we have not the word, and we are possessed of the idea when the word occurs to us. That species of memory which retains and reproduces words is termed recollection, and requires special consideration when we speak of memory as a whole. The power of retaining language is very strong in childhood, from the freshness of all mental activity in that period of life, and from its strong and instinctive sense of the necessity of language to its advancement; details and isolated facts have not in themselves anything repulsive to the child, as they have to the adult, whose power of generalization has increased in proportion as the animal vivacity of his perceptions has diminished. This is a fact in the constitution of childhood, which education must recognise. But as the word should be based on the idea, so should recollection on memory. To be able to utter a word without any apprehension of its meaning, is no mark of intelligence; and so the degree in which verbal is often allowed to shoot ahead of real memory, so far from being spoken of as right and natural, should be regarded as unintelligent. The child cannot understand as we do, and therefore cannot remember as we do; but he has his own intelligence, and that should be exercised in every mental act to which he is invited. He readily learns words, single facts, dates, and statements of rule, on what we

should consider as low and imperfect grounds; but we palpably debase his mind if we call forth its activity on no grounds of intelligence at all, but in a purely mechanical way. All the powers we are speaking of are modes of *intelligence;* any purely mechanical procedure, therefore, claiming to rank under intellectual education, is a self-contradiction. If he be asked to commit to memory any series of words which he recognises only as sounds, whether it be in the form of a vocabulary, or passage of connected discourse, or rule of procedure, that is a purely mechanical process, and is therefore inadmissible. He learns much that he cannot fully understand, and we should not conceal from him that it belongs to his weak nature to learn much on faith; but, without pretending to give him full understanding of all which we require him to learn, it cannot be maintained that we should insist on his committing words and formulæ, without drawing forth upon them in the first place that intelligent apprehension which he certainly can, in a greater or less degree, exert upon their meaning. We should task his memory through his conceptive power; and, so doing, we shall avoid the error of directing this faculty to worthless objects, and of paralysing it by repletion.

98. Memory Earlier and Later.—Memory gradually rises higher and higher in the sphere of intelligence, till at length we may say of it that it acts through the exercise of the judgment. The memory of the adult, as distinguished from that of the child, is strong or weak, according to the degree in which his power of analysis and of generalization has been cultivated; and it is to the absence of one or other of these that that weakness of memory is so often due, which is charged on natural defect. The principles of association, so called, by which we first analyse and then reconstruct for the purposes of memory, are these:—(1.) The principle of *natural contiguity* or juxtaposition, according to which objects or incidents which at their first occurrence impress the mind in conjunction, tend to recur to it in the same conjunction. (2.) The principle of *resemblance or analogy*, according to which objects or incidents which resemble each other are maintained together in the mind's possession by the fact of their resemblance. (3.) The principle of *cause and effect*, according to which facts which are at first apprehended as causally related to each other, occur ever afterwards together to the mind

by mutual suggestion (§ 119). The teacher who thus cultivates in his pupils the exercise of the mental power which is necessary to effective memory, should bear in mind the necessity of testing and reviewing the fruits of the process, in a similar way and for similar reasons as in the case of memory when it has only the earlier conceptive faculties to rest upon.

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99. Early Training of Conceptive Faculties.—All the faculties which have been spoken of may be ranked together as the conceptive faculties, since they all present or recall ideas to the mind. It is not unnecessary to insist a little more specially on the education of these faculties as a whole in childhood; for, certainly, they have received but scant justice. Their position in the whole human intelligence has not been duly apprehended. Looked on as subordinate, and as not indispensable to the so-called higher modes of intelligence, they have been passed over in the anxiety which education has shown to reach the higher modes. The common statement of the object of intellectual education, that it is to cultivate the reason as the instrument for acquiring knowledge, is, in its outward form, unobjectionable enough. But it is right only when it is rightly understood. The mind, as we have already seen, does not consist of a bundle of separate faculties linked on to each other, but is one and indivisible, and is entirely present in every intelligent act. The education of the intelligence, therefore, lies as much in the education of the conceptive, as in that of the reasoning, faculties. The education of the conception alone does not come up to our idea of the highest intelligence; but as little does the education of the reason alone. They are necessary to each other: conception as the means to reason; reason as the natural sequel of conception. The popular error has been to commence with the reason, and hence the subject-matter of study has from the first been presented in *logical* order. Naturally enough, this method has been found wearisome and barren; for it is about the subject-matter of knowledge, and not its forms, that the child is first solicitous; variety of perceptions, and not forms of the understanding. And it is to no purpose that teaching has striven elaborately to simplify the chains of reasoning; after all, they are addressed to a capacity which is incapable of receiving them. The remedy is to defer the culture

of the logical faculty, and to concentrate our energies for a time on the vivification of the conceptive faculties, whose activity is the sap or life-blood of the whole rational system. True art is often more shown in knowing how to use indirect means for attaining an end, these being often really, though not apparently, the most efficacious. So it is here: he who labours most, and most skilfully, to draw out and strengthen the conceptive faculties in childhood, does the most to rear up an intelligent manhood in every sphere of activity in which intelligence can be applied.

We can reason only on data presented to us for reasoning upon. If these are incorrect or feeble, the reasoning must be erroneous or hesitating. We can come to no conclusion with regard to the relations of an object, or consequences of an action, if we have no distinct apprehension of the features of the object or action, or if we but obscurely remember them. All are frequently obliged to admit their inability to form a judgment from defect of memory; but the inability is no less frequently due, though less acknowledged, to defect of conception and imagination. This is true in every department of life, whether in learning or in working, in general study and conversation, or in professional engagements. Hasty one-sided conclusions are in the main due to a want of that quality of attention which a proper culture of the conceptive faculties would give us. The difference in intellectual force and precision between one man and another, is often found to be less in an absolute disparity of power in mere intellection, than in the different degrees in which they have acquired, by the training of the observation, the habit of attending to what daily passes under their notice. The mind may be trained to a correct use of logical forms apart from the cultivation of the conceptive faculties. But the power of logic by itself is a barren power, dealing with abstractions. The mind that grows up under its influence must be deficient in the power of seizing things on their practical side, and in estimating their practical bearings; it must therefore be deficient in natural sympathies and in human influence. Truth is not the result of logic, but of intuition, experience, and logic together. "Nature herself," it has been justly said, "points out the safe course; the faculties which first require development are those which there is the least fear of overstraining. Observation, attention, memory, are the powers first called into play; and if their pro-

per exercise is once acquired, they turn life into a long course of the best education. With them the boy soon becomes a man, without them the man ever remains a boy. To a certain degree, they are developed by every kind of education, and even without any education at all (in the stricter sense of word); and for this reason, perhaps, it is not generally recognised to what extent they are susceptible of cultivation, especially in early life, and how much pain and toil may be saved to both teacher and pupil by early attention to their proper development." Necessary as is true conception to reason, it is no less so to discretion and high moral character. Imprudence is often the result of an imperfect conception of the circumstances in which we have to act; a low conviction of duty, of an imperfectly educated conception of the tendencies of virtue and vice.

On the whole, for future learning and work, for knowledge and capacity, for the power of practical apprehension, and of forcible well-illustrated exposition, for moral as well as mental vigour, the teacher must bear in mind that the cultivation of the logical intelligence should be postponed to that of the conceptive.

CHAPTER VIII.

THE JUDGMENT.

100. The Faculty of Judgment.—After the formation of ideas, the next step in the development of the mind's activity is the discerning of their relations, and the connecting of them into higher elements of thought. The mode of intelligence which does this is the *Judgment.* Whilst the object of the observation is an *idea*, and the name of that object a *term*, the object of the judgment is a complete *thought*, and it is expressed in a *proposition.* As there are different grades of terms, some more special, some more inclusive and general, so are there different grades of propositions in like manner. There are particular propositions, which comprehend no more than what is plainly stated therein; there are general propositions which comprehend a great deal more. By a comparison of particular propositions, we ascend to general; by evolu-

tion from general propositions, we may descend to particular. Every sentence we utter contains a proposition, which is the expression of a judgment. There are propositions so evident that they can hardly be distinguished from intuitions or acts of observation: there are propositions so remote therefrom that they can hardly be distinguished from formal reasonings.

The exercise of judgment commences very early, before any explicit process of education can reach the child's mind; and it is never finished. As long as education continues, it will find work in leading to the utterance of judgments suitable to the pupil's advancing mental power. Between the two extremes, there is indefinite scope for education, both as to the nature of the judgments themselves, and as to the subjects on which they are formed. The cultivation of the judgment is designed to make us familiar with all the logical forms into which thought can be cast; to show us the precise amount of significance in all the kinds of possible affirmation, as far as that is affected by the relation of their terms; and thus to prepare the way for an accurate estimate of the mutual relations of propositions themselves, and for the derivation from them of other (resultant) propositions by a process of deduction.

It will serve our purpose to consider judgment under three aspects, viz. *definition*, *comparison*, and *inference*.

SECT. I.—DEFINITION.

101. Definition.—Analysis of the process we call definition shows it to be a compound of two processes—abstraction and generalization. In observing any object, we contemplate its parts and qualities separately and successively, with the result of giving to each a name: this is abstraction. In observing certain objects of same kind, we find them to possess some of these abstracted features or qualities in common; in virtue of which community, we class them together under one term, as 'bird,' 'tree,' 'table:' this is generalization. But there are many degrees of generalization. Thus, bird may be further generalized into animal, or it may be subdivided into the less generalized form of 'bird of prey,' 'wading bird,' or the like. So tree may be generalized into vegetable, or subdivided into 'oak-tree,' 'beech-tree,' or the like; and these subdivisions may be again

subdivided. The object of definition is to refer any object to the narrowest class which adequately exhibits its properties. Scientific definition does this expressly; popular (not as meaning inexact) definition states the highest generalization to which an object belongs, and the abstracted qualities which peculiarize it. The process of definition thus implies the twofold processes of generalization, founded on the comparing of whole with whole; and abstraction, founded on the comparing of whole with part. The latter logically precedes the former, and in noticing the education of the pupil to them both we shall commence with it.

102. **Abstraction and Generalization.**—By the word 'part' is meant either a physical part conceivable separately, or a property or quality having no concrete separable existence: both alike are objects of abstraction. The former, from its being the more concrete and apprehensible by the senses alone, takes precedence in the course of education. The first exercise of judgment is to associate the whole with its parts, so that we may see the whole as made up of the parts. Accordingly, familiar objects are presented to the child's notice for this purpose. Of the sheep, he is led to observe that it has head, body, legs, etc.; of the oak, that it has root, stem, branches, leaves, etc.; of a book, that it has boards, leaves, pages, letterpress, lines, etc. Next to that, he is led to observe the properties of objects: thus, of the sheep, that it lives, and moves, and grows; of the oak, that it grows, but does not move; of an object like glass, that it is hard, brittle, smooth, and transparent. The properties of form and sound are subject to the same discrimination. Thus, of the line, he observes that it is long or short, straight or curved; of a sound, that it is loud or soft, long or short. The simplest act of judgment is in the association of any one part with its whole; a higher degree of the same kind of judgment consists in associating more than one part at the same time with the whole. The element of *series* is a new one, constituting greater difficulty in the act of association.

As abstraction is the comparing of whole with part, so generalization is the associating of whole with whole. Thus, the child observes of the sheep that it has certain parts as before; the observation of the cow or the horse presents the same parts, and suggests their similarity, with the possibility of noting them by a

common name; and thus he arrives at *animal* or *quadruped*. The recalling of other trees, plants, or flowers he has seen growing, at the time he observes the parts and properties of any particular one, suggests the general term, tree, plant, or flower. And, further, the observation of the same parts and peculiarities in more than one example of the sheep or the oak suggests that that animal or that tree is distinguished from all others, so as to require for all its examples one common name, as sheep or tree.

103. Relation of Observation to Definition.—All this, it may be thought, is no more than what has already been described as falling under perception; but the peculiarity which raises definition above conception is this, that the abstraction and association are latent and implicit in the one case, while, in the other, they are explicit. The expression in words is the essential part of the judgment; for by that the pupil goes through an additional mental process, with full consciousness of its nature; and for result, he is in possession of new knowledge. Formerly, his knowledge was indefinite and indistinct; now it is clear to his own mind by the broad boundary-mark which expression has drawn round it, thereby both defining and verifying. The association must be recorded, so as to have a real existence. It is hence evident what a vital blank there is in the educative process, where the habitual full utterance of the proposition which embodies the result of the observation is neglected; the error is of the same kind, as if in training the conception we failed to carry the process out to its issue in words. The fact that this is a new and higher mental act is apparent from the comparative difficulty with which the child acquires the habit of it. This example sets forth the difference between observation before, and observation after, definition:—"An untaught African has often seen the hippopotamus in his native rivers, and has a name by which to designate him. An educated European has probably never seen the animal at all; and yet, by the relation of others, he knows far better what it is (logically speaking) than the man who has watched all its habits from infancy. The term by which the animal is noted is manifestly a different intellectual force in each of these cases. In the former it represents a mental image, formed out of a continued series of experiences; in the other case, it is a pure generalization, as understood only by its definition, and its relationship to other terms

that express the most prominent abstract qualities of the animal itself."[1]

Observation is the soil out of which the power of definition must grow. It is therefore in concrete forms, as they exist in nature around him, and subject to his experience, that the child must be first initiated in definition. But the power must be expressly cultivated ; even in the sphere of observation, it is not to be assumed as naturally existing, or as one which grows up by the mere fact of observing.—Definition exceeds observation as a mental act, and therefore must be called into existence gradually. The child's mind can take in but one affirmation at a time, even of what is under his eyes. Hence the error so often made in giving him full definition, even of visible objects, prematurely, instead of giving him but one part at once, accustoming him to make one association at once, and reserving the group of associations till his mind is stronger.—A third remark to be made is, that it is entirely unnatural to give definitions of abstract or verbal nouns at first ; this is manifest from what has been said. These remain to him as a field for exercising his power of definition at a later period. After he has been accustomed to the analysis and reconstruction implied in defining concretes, he will understand the necessity of, and be prepared for, the same act, whether as applied to numbers, or grammatical elements, or individual words of whatever complexion. Even when he does advance to the region of the abstract, there is no period connected with his school-education, in which the process of definition should be kept purely abstract. The result admits of being illustrated by reference to concretes, generally within his own experience ; *e. g.*, *exertion*, by reference to the pupil exerting himself ; *spectacle*, by reference to some scene which he can look upon ; *charity*, by reference to the deeds of the charitable man.

SECT. II.—COMPARISON.

104. Comparison—The Relation of Resemblance.—In all connexion of ideas by the judgment there is comparison implied. In definition, which consists in affirming the parts of the whole, there is comparison between the whole and the parts. The com-

[1] Morell's *Elements of Psychology*, p. 211.

parison we have here in view is the act commonly understood by that word, in which things of the same kind, and co-ordinate as whole with whole, or part with part, are brought together from some resemblance in nature or in function discerned between them. We shall consider the act of comparison in four aspects of it, founded respectively on Resemblance, Analogy, Dependence, and Ratio.

The child's sense of resemblance is not the result of education any more than his perception is; we find the one operating equally with the other before any educational processes can be applied to form his mind at all. It first shows itself in his extension of the terms by which he is taught to designate familiar things about him to any other things he meets with, having even a faint resemblance to those to which the terms belong. Not to go back to earliest infancy, in which it overleaps even the void between animate and inanimate nature, when he learns that *horse* is the name of an animal, he will apply it to the cow, or the ass, or any animal of similar size; the name of one flower, as *rose*, to all other flowers; and the name of one coin to all others, in virtue of what is in each case only a very general resemblance to the eye. It is generic resemblance that first strikes him, and with which, therefore, we have first to deal. Our object in appealing to this sense, must be to render explicit and well-defined the points of resemblance between genera, which he apprehends vaguely by intuition. In selecting the classes of objects on which to exercise him, as well as deciding on the points of resemblance to which his attention should be called, we naturally follow the course of his observation. The familiar objects of nature first claim our regard, and their physical or separable parts before their abstract or inseparable. The child's earliest perceptions being those of colour, size, form, and motion, given him by sight, he should be led to notice the resemblance of one object to another, whole to whole, in respect of these perceptions. Thus the sheep is set beside the dog, or the dog beside the cat, in respect of size, general contour, and manner of motion; the white of the lily is likened to the white of snow or of paper; the pink of the rose to the tint of the ribbon he wears. And such resemblance is extended to objects of which one is absent and inaccessible, to be conceived of only by the imagination; as when the wolf is compared in size and

outline to the dog, the tiger in appearance to the cat, the stem of the palm to that of the lily or the cane, and the appearance of mercury to the brightness of silver. In considering the details of structure in objects, this same process should be applied between part and part, as when the claw or covering of the tiger is illustrated by that of the cat, and the fruit of the cocoa-nut palm by the common hazel or walnut. Somewhat later, more abstruse conceptions of the qualities of bodies revealed by sight, and those which touch makes known, become the subjects of comparison, as when the transparency of glass suggests the transparency of the atmosphere or of water, or the porosity of a sponge is exhibited in different degrees as in sugar and wood, or the elasticity of a steel-spring found to exist in india-rubber and in air. These resemblances, being such as would never occur to himself, require to be verified by observation, and the more unexpected they are to him, they are the more valuable as a process of education, because more stimulating to the sense of resemblance. Besides natural objects, and their parts and qualities, there is another department of the child's instruction very fertile in materials for the activity of this sense, viz., form. Thus the straight line, singly and in its various combinations, may be made to figure in his mind as the pencil, pen, cross, star, arrow, letter of alphabet, and so on; the rectilineal figure, as table, box, window-frame, house, or box; the curved figure, as plate, hoop, bell, target, egg, or cup; and the geometrical solids which the teacher submits to his observation become common things in his eyes, when exemplified as play-ball, orange, turnip, building brick or stone, pillar, arch, roof of house, turret, or church-spire. The significance of the educational maxim which is the expression of this procedure, viz., to teach the unknown by the known, is now generally acknowledged; but to be valuable, the process must be the child's, and not merely the teacher's. It is for the teacher to present the objects of comparison so, that the resemblance which he aims at eliciting shall spring up in the child's mind in response to his hints, suggestions, and questions.

The idea of likeness involves that of its opposite, unlikeness; the sense of resemblance is equally cultivated by being directed to both. Wherever we can institute comparison between objects of any kind, we can institute contrast, and the teacher will often

find contrast the more impressive, and the more effective for carrying out the procedure from the known to the unknown. The discrimination of difference is the consequence and the proof of success in educating the sense of resemblance. In all that has been said of comparison, therefore, it is to be understood that contrast is included; only it is to be observed that the sense of difference follows that of resemblance in nature, and should therefore be kept in arrear of it during education.

Whilst the whole value of early teaching lies in its 'comparative' aspect, the use of comparison is, nevertheless, incidental rather than formal. A set process of comparison continued through several particulars will not be found to have interest for young children: it is above them, from the mere fact of the series which it involves. They can contemplate but one point of resemblance at a time; and they should therefore not be presented with a chain till they have learned to estimate the nature of single links. On the other hand, the incidental, and, as it were, unpremeditated suggestion of a point of resemblance to illustrate something they are considering, is a source of both pleasure and advantage to them.

The field for the exercise of the sense of resemblance can never be exhausted. As the pupil advances, we have only to change the class of objects, and to lengthen the chain of comparison. The process may thus become both more subtle and more complex, so as to make a greater demand on his attentive observation; whilst in the case of the simpler classes of objects, which he has already examined, it passes into the higher processes of analogy and classification.

105. The Relation of Analogy.—Analogy is a species of resemblance. When we speak of any one as the 'head' of the state, or the 'pillar' of the state, we imply that he is to the state what the head is to the body, or what a pillar is to an edifice, its governing or sustaining part. Analogy is the resemblance, not of objects, but of functions or relations. From its involving four terms, it is necessarily of later development in the mind's growth than resemblance, which involves only two; and yet, notwithstanding its greater complexity, it is not of late development. The first exhibition of it is, perhaps, that habit of personification by which the child represents his toys or dolls, as persons or animals acting with the

consciousness of living agents, in co-operation with or obedience to his will. In specifying the different fields for analogy in which the teacher may call forth the judgment, we shall find ourselves, as before, following the course of the child's own observation. In animal structure, we may instance as a point round which many analogies may cluster, the weapons of defence with which various tribes are provided—from the tusks of the elephant, and the teeth of the lion, to the hoof of the horse, the sting of the bee, and the prickles of the hedgehog; in their habits, the analogies between the nest of a bird and a house, between the retreats of the smaller quadrupeds and the nests of birds, between the organization of the beehive and that of a community, suggest themselves. The features of the vegetable world are rich in their suggestions of analogy; and, indeed, can be comprehended only as analogy is employed to illustrate them. Thus, the stem of the tree is analogous to the trunk of the animal, the circulation of the sap to the circulation of the blood, the leaves to the respiratory organs, and so on. Further analogies are found in the comparison of the smaller flowers and plants with the larger and more distinctly developed; and in the exceedingly diversified manner in which plants effect the dispersion of their seeds. It holds before, as in simple resemblance, that the more dissimilar the objects between which the analogy exists it is the more instructive and stimulating.

Descending to inanimate objects, there is hardly a natural feature of climate that is not illustrated by analogy; thus there is the 'smiling' or the 'raging' sea, the 'laughing' streamlet, the 'mantle' of the clouds, the 'chariot' of the sun, the 'faithful bosom' of the earth, the 'mouth' of the river.

106. The Analogies of Language.—We cannot construct for ourselves the whole compass of analogies which may be embodied in a language, any more than we can form for ourselves the whole range of conceptions, out of our own observation; but the study of language, in the one case as in the other, supplies the defect to an indefinite extent. From its very nature, language is a fertile means of cultivating the sense of analogy. The language of the child is highly analogical; his command of words is very limited, his perceptions are fresh and vigorous, and he naturally applies his small stock of words so as to cover as much ground

as possible. Hence his language is almost as figurative and analogical as that of the poet himself. Whether we regard the words of a language or the forms of connected discourse, the field for analogy is equally wide. Epithets have already been incidentally alluded to in their application to objects. Another class may be mentioned, that in which the qualities of man are ascribed to animals, as when we speak of the 'busy' bee, the 'generous' dog, and the 'patient' ass. But beyond epithets in which the poetical element is instilled, we have the analogical sense exhibited by a very large proportion of the notional words of language, lying partly in their primary and literal senses, and partly in their secondary and transferred senses. We have examples of the first in the literal and figurative uses of such words as 'move,' 'rise,' 'fall,' 'handle,' 'revolve,' 'sharp,' 'clear,' 'fruit,' 'death;' of the second in the ordinary use of such words as 'attract,' 'intend,' 'reflection,' 'suspect,' 'impostor,' and the like. The tracing of such analogies, often minute and subtle, is great part of the study of etymology, as pursued by advanced classes. Passing on from single words to the forms of connected discourse, metaphorical language of all kinds, whether embodied in simile or in proverb, is very instructive. To the former belong the emblems abounding in Scripture, of which the investigation is so fertile in spiritual instruction, *e.g.*, "ye are the salt of the earth," "our days are as a shadow;" the latter abound both in Scripture and in the language of nearly all nations: an idea of their utility may be gathered from the attempt to explain verses of the Book of Proverbs. After emblems and proverbs, there remain available, as medium of instruction by analogy, fables (which are particularly suited to young children) and parables, of which the analogy of the literal and the spiritual sense is the very essence. The mode of handling the analogy in this important field will afterwards call for minuter exhibition. (§ 423-5.)

107. **Moral Analogies.**—There is another department of instruction whose utility lies, to a great extent, in the development of analogy; and that is the practical moral instruction conveyed to children by biographical and historical narrative. The evolving of practical lessons from these narratives, when conducted with a proper personal application, consists in seizing on the analogy between the circumstances of the parties whose conduct is de-

lineated, and those which may occur in our own experience. If we fail to do that, the efficiency of the moral teaching is much diminished. There will be occasion to work this idea out further in speaking of moral instruction; we refer to it in the meantime for the intellectual exercise by which alone the moral benefit of such instruction is to be reaped.

There is no more frequent source of error in reasoning, and in conduct, than false analogy. All instances of this which occur should be exposed; a sufficient number will doubtless suggest themselves in the course of oral instruction to show how imminent the danger is.

108. The Relation of Dependence.—The relation of mutual dependence is that according to which things, having no resemblance or analogy to each other, are found co-existing. This dependence may exhibit itself either in simultaneous incidence or in successive; and it equally characterizes the world of nature, of abstract thought, and of man's industry. The study of natural objects is that in which it will first strike the child's mind, and in which it may be most diversely traced. His sense of dependence may, *e.g.*, be readily stimulated by reference to the scenery, of which a description forms so large a part of his early instruction in geography; thus he sees the hill and the river intimately connected, the character and size of the latter determined by those of the former; the fertility of the plain greater than that of the hill-side, so that each has its definite capabilities of growth; the products of the plain regulated by its height; the engagements of the people among whom he dwells determined by the aspect of the district, so that in one case they are tillers of the soil, and in another they are occupied in commerce. Similar dependence may be presented to him from among the phenomena of climate, *e.g.*, the operations of nature in the formation and distribution of rain; the sun, which seems the great antagonist of rain, yet drawing up the water from sea, river, and earth by evaporation into clouds, and these passing from a lighter to a heavier state, till they discharge their accumulated stores upon the earth; the motion of the clouds, under the impulse of wind, hither and thither over the earth's surface, the varying character of the showers, their sinking into the soil and oozing through into drains, rivulets, and rivers, till, again, the ocean relieves the earth from the overplus.

And in the animal world, which is, perhaps, the first and most easily interesting field of his observation, his sense of dependence is stimulated by tracing the whole system of adaptation between the habits of animals and their circumstances; he sees the horse fitted for the service rendered by him to man by his size, strength, swiftness, and capability of enduring all climates; the structure of the lion's teeth, claws, and tongue adapted to the food on which it lives; the provisions of the whale in respect of covering and breathing, to its habitation and structure, and of its buoyancy and motive power to its size; the peculiar organs and expedients which fit the swimming-birds for their watery residence; and the connexion which exists generally between the habitation of various tribes of animals and their food.

Then, again, the various departments of human industry exhibit this exact dependence of parts under the influence of one pervading design; the corn of the field goes through the various processes of sowing, reaping, threshing, grinding, baking to make it into the state of bread in which we use it; the cotton which clothes us must be gathered, picked, transported, sorted, spun into threads, woven into cloth, bleached, and dyed, to be brought into the state in which we wear it; whilst the metal of which the knife is formed has to be dug, crushed, washed, smelted, cast, and tempered. In all industrial occupations whatsoever, a long series of steps are to be taken, all in mutual dependence, from the first, the form in which nature gives the material, to the last, the form in which we use it for the particular purposes of life.

The same relation of dependence is traced in the departments of abstract study which the school presents, of which grammar is the most obvious example: speech, representing our ideas of the outward world, must express the multifarious dependences which we observe to exist therein, as of object and quality in the noun and adjective, of agent and action in the noun and verb, of action and subject in the verb and noun, of action, time, place, or manner in the verb and adverb, of cause or circumstance in the preposition, of the distinction of persons in the personal pronouns, of the function of persons and actions by the conjunctions and relative pronouns; and the same dependences are to be traced at a more advanced period among the higher grammatical constituents of the sentence.

Finally, there is another department in which the sense of essential dependence is too important in its bearings on life to be omitted, namely, instruction in social and moral conduct; the connexion, *e.g.*, between diligence and well-doing, between kindness to companions and social comfort, between truthfulness and approbation of friends, between persevering attention and success in study; the observation of which dependences, in narratives of life and in experience, is the foundation on which the notion of law, as applying to morality, is in course of time to be evolved. This exhibition of the manner in which the sense of dependence may be appealed to in the various departments, is given with the view of impressing the fact, that it is only when they are treated so as to educate that sense, that they are treated in a way conducive to intellectual education.

109. Ratio.—By ratio, we understand not any different relation from those already expressed, but the application of them to the subject of number; only the field is so different as well to deserve a special notice. The word is therefore to be understood in a wider sense than its ordinary one. Resemblance and difference amongst objects pass into equivalence and inequivalence when we apply them to number; the perception of which may be cultivated from the first. Numeration, which teaches the value and succession of numbers, is a constant training to these attributes of number; for it requires notice to be taken of the relation of each number to those before and after it. The adding, subtracting, multiplying, and dividing of numbers, properly graduated according to the perceptive power of the pupil, are continuous instances of equivalences and inequivalences. This training of the judgment by comparison of number is twice available; in infancy, when number is presented as a property of objects, and subsequently in childhood, when the pupil makes his first advance into the region of abstract number. Particularly valuable as a means of training are the tables of value, or of concrete number, where these are taught constructively; the pupil learning any one unit by his own observation, adding it to itself till the higher units are arrived at, and then applying these to actual measurement. And, after the learning of the tables, there remains the application of the elementary rules to them as to abstract numbers. Analogy, which is literally the duplication of ratio, is practicable from the earliest time in an indirect way; in-

deed, the working of all elementary practical questions turns on its use. "If there be two flocks of sheep, containing twenty sheep, how many in three?" "If one loaf cost 2d., what will it cost for three?" imply analogy, as truly as the explicit and formal statements of proportion. As to mutual dependence, there is no numerical operation, abstract or applied, where dependence is not essential to the mode of working; there is dependence between the terms and the sum in the working of addition, between the terms in subtraction, between the factors and the product in addition, between dividend, divisor, quotient, and remainder in division; and in all those questions which are performed by partial operations, there is dependence between the component digits of the numbers operated upon, and the component steps in the operation. The use of number as an instrument of intellectual education, and the training to practical acquaintance with it as an instrument of computation, alike require a judicious exhibition of such dependences.

SECT. III.—INFERENCE.

110. Relation of Causality.—The relation of cause and effect is one of which the mind is slow in arriving at a comprehension. Its earliest form is mutual dependence, already spoken of, in which the data and conclusion are alike within reach of the child's observation, and the link that connects the two is derivable from the same source; as when he discovers the reason for the flooding of a river in spring and after rain, or for the motion and shape of the fanners in a windmill. It is important to exercise the mind largely on the process of dependence before training it to inference, or the process of reaching a conclusion, which has no *sensible* existence at all, but is purely a creature of reflection. A process so abstract must not be too early submitted in education, as being foreign to the child's whole habits of thinking. He may appear, indeed, intelligently to follow it; he may readily assent to every step, and accept of the conclusion; the triumph of inference may seem complete; but, after all, he is merely assenting to authority; he receives the conclusion on the same footing as the premises; he holds the result not as a *conclusion*, but simply as a *fact*, and in the manner of other facts. Nothing can be more delusive than to assume that he reasons, in the

strict sense of that word; and nothing more calculated to make him reason badly, than to stimulate this assumed ability too soon.

When the pupil is sufficiently advanced, education must accustom him to examples of inference, both inductive and deductive. Induction aims at drawing the general out of the particular; the law which governs the facts, from the facts themselves; the cause from the effect. Deduction aims, by the reverse process, at drawing the particular from the general; the facts from the law which governs them; the effect from the cause. Both are necessary parts of that completed reason, by which scientific knowledge is established. In the order of logical development, induction comes first, and lays down the plan or outline of our knowledge; then deduction reduces the contents to order within that outline. Induction is the first to be appealed to in education; deduction is the pupil's last mental effort. The soundness of induction is dependent primarily on the accuracy of observation, which must be wide enough to warrant any inference at all, and accurate in determining the extent of agreement between particulars; hence the stress already laid on the culture of the conceptive faculties.[1]

111. Its cultivation in Natural History.—The later period of school-education presents abundant materials for cultivating the power of inference, both inductive and deductive. We shall notice three departments of study as illustrative of this. The first is the study of natural objects, or, as we may now term it, of *Natural History*, in one or more of its departments. It is in connexion with *classification* that the habit of inference is to be established. We have already noticed, in speaking of comparison, that it is the resemblance of genera which the child first occupies himself with; his sense of difference, by which classification is carried downwards from genera, being of later growth. He is, accordingly, at first led to observe in what respects, *e.g.*, the dog, the sheep, the cat, and the fowl, agree as being animals; the rose, lily, and the thorn, agree as being vegetables; gold, lime, coal, and clay agree as being minerals: he receives the generic mark of each of the three divisions. By subsequent observation of certain differences amidst their resemblances, he reaches the idea of the division of animals into insects, reptiles,

[1] Thomson's *Outlines of the Laws of Thought*, Part IV. sects. 113-119.

fishes, birds, and quadrupeds; still further, observing differences amongst similarities, he is led to discern how birds are subdivided —swimming-birds, birds of prey, wading-birds, etc.; still further, observing differences amidst similarities, he finds under birds of prey, the eagle, the falcon, the owl, the hawk, etc.; and still further discriminating differences, he reaches, *e.g.*, the different kinds of owl, as the barn-owl, snowy-owl, etc.: there the process stops, for another step brings him down to individuals, at which point the investigation of law ceases. Here is a succession of steps of resemblance, modified by differences more and more, until the genus with which he started is broken up into order, sub-order, species, and variety. The result in each case is founded on the observation of a number of individuals, and the summation of the points in which they agree or disagree; there is, in each case, an exercise of inductive inference, in the course of which he has been led to verify the data, and to distinguish between the accidental and the essential features of objects—preliminary steps to the inference itself. The language used in the *classes* of natural history points out the extent of the field in which this exercise may be given. The terms by which they are denoted should not be hastily put into the child's mouth before they have any meaning for him, but should be regarded as sign-posts to mark his progress in induction. One example of each species or genus is not enough to give the character of the species or genus, but the comparison of two may suffice; and when this comparison has led to the mark of one species or genus—that is, to its law—deductive inference is applied to fill them up. Thus certain features (web-foot and broad bill) make up a species, 'swimming-bird,' as exemplified by the duck or the swan; the structure of the pelican, when it occurs to be noticed, may be inferred without fresh observation from the fact of its being referred to that species; the law already established is applied to individuals falling under it. So when a comparison of the ox and the sheep have given the idea of 'ruminating,' the fact of the camel, deer, goat, or buffalo being classed as ruminating, determines certain marks of structure and habit in each, as stomach, molar teeth, cloven hoof, herb-food, and range of climate.

112. **In Language and Number.**—The study of language should likewise furnish materials for inductive and deductive in-

ference. Certain words are observed to have in common the mark of *names;* to them the word *noun* is applied. By observing difference amidst similarity, the subdivision into common, proper, and abstract is reached; by further observation, the subdivision of common into class nouns, collectives, names of materials, and names of measures; and abstract nouns are seen to include names of qualities, actions, and states. So with verbs, pronouns, and adjectives, and other parts of speech. Then when the law or 'number of marks' of any one, as the abstract noun, is perceived by comparison of a few inductively, the future reference of any noun to that class suggests to the mind the whole of the marks belonging to the class. Each rule of syntax is treated in similar manner; it is reached as the result of comparison, *e.g.*, the government of noun by the transitive verb; when 'transitive verb' occurs afterwards, we infer deductively that it follows the law of the class, and has an object after it. Not only each syntactical law, but each kind of sentence, and each rule of connexion among sentences, is to be handled in this manner; first inductively and then deductively. The benefit of this training through grammar is lost according to the false view often taken of the science, as regulating, instead of being regulated by, language; as consisting of rules *a priori* imposed on language, and not of rules gathered by observing the usages of language. (Part iii. chap. 4.)

The rules of arithmetic are to be treated in the same way; there is one discipline of the reason in their acquisition, another in their application. Under any one rule, that of interest, for example, the rule is reached as the result of comparison of a few simple questions, in which the data are considered in connexion with the conclusion sought, and a certain series of steps seen to be necessary. These are summed up, and stated in form of a rule for all succeeding questions. Then when a question is determined, by some leading feature of its construction, to belong to the rule of interest, the rule, with all the steps it involves, is applied to it, and the reason required at each step. Arithmetic is only taught as a mental discipline, when its rules are thus reached by induction from particular cases, and then applied to cases by deductive reasoning. (§ 367-8.)

113. Over-Reasoning.—Whilst all instruction should be con-

veyed in an intelligent manner, it is not necessary that a child should comprehend *fully* all that he learns. There are many things which he requires to know practically before he can know them theoretically; matters both of science and of conduct. So far as these are level to his intelligence, they should be explained; and there are no subjects on which his intelligence may not be exercised in certain of its aspects, and to an extent quite sufficient to interest him. But it is wrong to try to make him comprehend a demonstration which as a whole is beyond his capacity; not only because the attempt will necessarily fail, but because of the bad intellectual and moral habits to which such a course will lead. He will, in the first place, suppose that he is capable of knowing everything, and will cease to receive anything on authority, which is unnatural in a child; and secondly, he will never come to know what clear and accurate knowledge is, from the boundary never being drawn between what he knows and what he does not know.

CHAPTER IX.

THE POWER OF CONNECTED THINKING.

114. Importance of this Power.—There remains to be noticed a still higher mode of intelligence than any already described, one to which they naturally lead, and without which they are incomplete and of partial value, viz., the power of connected thinking, or, as we may call it, considering the relation of thought to speech, the power of Discourse. With a view to future self-education, we must give the pupil the power of reading, and the power of profiting by what he reads. By the former we mean fluency in reading; such a fluency as shall relieve the mind from a sense of labour and oppression in taking up a book to read. If we give this, there is a presumption that the habit of reading will continue, unless excluded by adverse circumstances afterwards; if we do not give it, the degree of power acquired in school will soon die away from want of practice, for one will

never persevere in an occupation which he dislikes, and every one dislikes as a stated occupation what he cannot do well. The means for giving such a skill in reading will naturally claim our attention afterwards (Part iii. chap. 1.); what we have here to consider is the power of thinking on what is read, or the power of *thoughtful reading*. By this will the pupil's future progress be measured: by reading of any sort, indeed, he may be furnished with the means of amusement and recreation, and thus attracted from occupations of a lower sort; but, only as he reflects on what he reads, can he acquire knowledge, and improve his mind, and increase his influence and usefulness. For both the improvement of mind and acquisition of knowledge imply careful arrangement of the materials of reading; without method there can be no accumulation of store. This power of connected thinking may not be often attainable in the common school, and often only to a small degree; but if we are to speak of its work as *educating* at all, it is impossible to set for it a lower aim than that; and by the degree in which it attains that end, and especially in a free country where so many duties and privileges devolve on all ranks of society, may we not unfairly estimate the utility and success of our school-system.

115. Defects and Remedies.—The experience of every educated person may lead him to perceive precisely what is wanted, both as to end and means, in order to give this power of thinking. The means of instruction in after life are twofold: (1.) reading; and (2.) oral instruction; and our progress depends on the way in which we are prepared to avail ourselves of these means. In what follows we shall, for brevity sake, speak of reading alone, though both are alike important; what is said of the one will apply equally to the other. The faults in reading, then, which so often make it unprofitable, are such as these:—that we read with the eye alone, the thoughts passing before or through the mind, perhaps, but neither remaining with us nor stirring up mental activity; or, if we are at the pains to comprehend single statements, and careful to connect them, so as to see how one follows another, or why a statement occurs in the place it does, that we do not discriminate what are propositions and what proofs, what are proofs and what are illustrations, what the writer assumes us to know and what he designs to tell us, but accept all

alike with the same facility ; that we do not sum up the whole, to see what its design has been, and to judge whether the writer has attained it or not, but, if we do anything at all, carry away the reasonings, not as reasonings, but as facts. "Thus people habituate themselves to let things pass through their minds, as one may speak, rather than to think of them. Thus by use they become satisfied with merely seeing what is said, without going any farther. Review and attention, and even forming a judgment, becomes fatigue ; and to lay anything before them that requires it, is putting them quite out of their way."[1] The mental vices on which this habit grows are obvious. First of all it may be founded on *indolence* or sheer inertness of mind, in which the desire to know is either not felt as a stimulus at all, or is too feeble to urge to the necessary exertion ; or it may proceed from *impatience*, as shown in the anxiety to see quickly to the end of what the writer has to tell us, and in the consequent skimming over the surface of his narrative without either verification or review. It may proceed from *inattention*, a state in which the mind cannot control itself so much as to concentrate itself upon the one point before it, but yields itself as a plaything to the various trains of thought that may flit across it, and is, accordingly, with the loss of much time and power, constantly being compelled to resume the broken threads of its labour without ever finally reaching the end. It may be caused by want of *clearness of conception*, arising from the reader not systematically taking the pains to define his own thoughts, by questioning himself on the statements as he proceeds, ascertaining by reproduction in his own words how much of the writer's thoughts he apprehends and how much he does not, and proceeding to the sequel before he has prepared any solid basis on which the results of his further study are to be placed. It may arise from the *want of discrimination* to distinguish between what the writer assumes and what he seeks to prove, between his proposition and his argument, between assertion and illustration, between what is weak and what is strong. Or, finally, it may be owing to mere *inability to hold* the chain of reasoning ; so that the reader, though he may apprehend well enough the data singly, does not feel their cumulative tendency towards a definite conclusion.

[1] Bishop Butler's *Sermons* : Preface.

For these various defects in mental habit, we are not at this point called on, for the first time, to find a remedy; that would be hopeless indeed. We are thrown back on the whole previous course of education, which should have been from the first a preparation for the continuous and connected effort to which the mind must now subject itself. With the view of dissipating mental *indolence*, the teacher has sought to invest knowledge with an interest which might be sufficient to stimulate to the exertion needful to obtain it. To give the pupil the power of *attention*, he has sought, by due regard to the law of exercise and gradual development, and also to the mode of the mind's working at successive steps, to accustom him to fix his whole mind on a point for periods of gradually increasing length; and the hope is not unreasonable that the attention which has been gained for the concrete will, under due guidance, learn to transfer itself to that which is abstract. To imbue the mind with the habit of *defining clearly* its own thoughts, the object of the teacher has been to give vitality to the conceptive faculty, in forming and grouping its ideas, and to test this vitality by its ability to reproduce them in words. The habit of *discrimination* by the senses and the imagination has been systematically exercised; and, to a great extent, the habit of logical discrimination has been awakened in the processes of defining, comparing, and inferring, as above noticed.

116. Earliest Exercises in Connected Thinking.—Within the limits of observation and experience, the pupil may be accustomed to an orderly arrangement of ideas before he can apprehend either its value or the principles which regulate it. For this end the teacher should convey his instruction in logical order, so as to make the entire oral teaching a practical and implicit training to reasoning. The effect of this will readily be apprehended by two illustrations. The earliest moral and religious instruction is given orally. Suppose, then, the teacher recites, as the groundwork of a special lesson, some incident from biography or history. If the story is well recited—that is, in such a way as to call forth the intelligence, and remain in the memory—its facts will be strung upon a thread of rational connexion, whose continuity will be felt even by very young pupils. Again, all the information which the child acquires about the things around him is by oral instruction.

Suppose, for instance, the structure of an animal is under consideration: if it be put to the pupil himself to name the parts, he will probably name them indiscriminately, and out of their natural connexion, and he will certainly omit some that are essential; thus his grouping will not be such as to enable him to form a conception of the animal. But the teacher guides him to notice, first, its general size and shape; then its head and features, as being characteristic of its appearance; then the parts of its covering together, as what next strikes the eye; then the organs of motion together, legs, feet, joints, etc.; and then, probably, its organs for food, which will elicit some that would escape notice, and bring together some that seem, at first sight, to have no natural connexion; thus connexion and sub-connexion are introduced, in which the order is recognised by the pupil, and is felt by him to help both his intelligence and his memory. On which process it may be observed—(1.) It is not essential that the pupil should be made fully to comprehend the propriety of this arrangement; it is enough if the process is logical, without any demonstration that it is so; if a process of this character becomes a habit with him, he will come to understand its propriety in due time. (2.) The fulness of the arrangement is a matter quite distinct from the arrangement itself. The amount of details introduced should depend on the advancement of the class; be that great or small, the arrangement must be alike logical. (3.) These first efforts at connexion, on the part of the pupil, are practicable, solely as being within the sphere of his experience or observation; they are not exerted upon things abstract. The faculty of reasoning follows the same order in its cultivation as all which precede it. If the pupil's observation is not exercised in the case of natural objects, and his own experience of life appealed to in illustration of incidents from the life of others, there can be for him no rational connexion at all; the topics may be in logical juxtaposition, but they are not felt to be so.

Oral instruction continues to be the channel through which this power of connected thinking is exercised till a comparatively late period of the pupil's progress. Necessarily so, for the threads of connexion in discourse are very various, and the pupil must be taught to think along these threads by the teacher's help, before he can undertake the process unaided; nay, he must, by long

practice, acquire the habit of doing so. In all departments, therefore, of his knowledge, and even after the reading lesson has come to be apparently the main channel of instruction, it depends on the character of the oral instruction whether the lessons are made exercises in thinking or not.

With advanced pupils the power of reasoning is exercised in two directions; they are, on the one hand, accustomed to acts of formal reasoning, as in the study of grammar and arithmetic; and on the other, they are required to analyse for themselves the reading lesson and collateral lessons, that they may learn to apply their reasoning in the way in which they will be called on to apply it in the future self-education of life.

117. **Formal Reasoning.**—It is in grammar and arithmetic that the common school finds the means of training the pupil to formal reasoning, so that they are regarded as pre-eminently the two disciplinary subjects in its course of study. What we have in view under *grammar*, the grammar of the mother-tongue, is the full analysis of the sentence—the greatest whole that grammar has to do with—the grammatical analysis as involving the logical. If we take a sentence from some author for analysis, we have to discriminate its principal members, to assign to each its rank, and to tell the nature of the relation, conjunctive, adversative, causative, or cumulative, that exists amongst them, with the grounds in each case for this relation; we have to discriminate the subordinate members, the nature of the various relations they sustain to the principal, to which of the principal they are related, the grounds on which we assign them such a relation, and the manner of its expression; the several degrees of subordination amongst the subordinates, primary, secondary, etc., with similar reasons for the relation we assign to them, and the manner of its expression; and then, on review, to distinguish the degree of connexion which each of these subordinates has to its respective principal. We have still further to apply the analysis to the several principal and subordinate members already discriminated, stating the component parts of each, the relation between them, with the grounds, and manner of expression of that relation. In an ordinary sentence, there is a considerable chain of ideas; but if we present for study the higher prose and poetical styles—the latter especially—where the sentences are long and the clauses transposed, the habit of ana-

lysis implies much practice in deductive reasoning, and the power of attending to long chains of connexion.—The analysis required to solve, methodically, an arithmetical problem may be placed by the side of gramatical analysis. There are to be distinguished the data and the conclusion, with the relation in which the former stand to the latter; on this depends the perception of the nature of the main operation required for solution. Probably the data are given only indirectly, and have, one or other at least, to be deduced from anterior considerations suggested by the problem; then they have to be brought into symmetrical forms, to enable them to be operated upon correlatively; and then there are the technical steps in computation, by which the conclusion is to be reached. If we consider the diverse and complicated nature of the problems that may be proposed under each of the various rules in arithmetic; the power of solving them, trained up, as it must have been, through a long succession of steps increasing in difficulty, implies that the pupil has been subjected to a long course of deductive reasoning. The benefit of the thorough study of these branches is of the same kind with, though less in degree than, that which is derived in the upper school from the study of geometry. In both, the reasoning is conducted within the barriers of a given number of definitions and axioms, which "limit all that is admitted into, and supply all that is necessary for, the train of reasoning pursued at the moment." The materials are definite, and have each a definitely assignable place in the process of reason; so that the chain is either not constructed at all, or it is constructed so as to be exhaustive and absolute. And thus, so far as he is exercised in it, the pupil is accustomed to processes of reasoning which are complete and irrefragable, and to that arrangement of formulæ which makes them so. But if these studies are to serve the purpose of an intellectual instrument after this manner, they must be used in an intellectual way. *Method* of analysis and of solution, in the respective cases, gives this benefit, and not *result* merely; indeed, correct results, by careless or defective method, are of little value for the purpose we have in view. The pupil must be accustomed to definite schemes, both in his practice and in his written exercises; all the points being placed clearly beside each other, so as to show their relation, and the terms which indicate the links of

connexion throughout the process being explicitly and emphatically noted.

118. Logical Use of the Reading Lesson.—The investigation of the reading lesson forms the highest exercise of connected thinking in the common school, and, if judiciously conducted, ought to contribute very much to the habit of reflective reading when school life is over. As the reading lesson, however, is the common practice ground for the pupil at every stage of mental development, and in all the modes of thinking and expression, it is necessary to specify that we are now looking at it, not as composed of sentences to be gramatically analysed, nor of words and phrases on which the conception and imagination may be exercised, nor of propositions whose comprehension is to be accurately defined, but of a chain of connected statements, in which the progress and summation of the thought expressed therein are the object of study.

In adverting to the analysis which the advanced pupil must, as the issue and test of his previous education, carry out for himself under the teacher's guidance, we may plead, in passing, for such a construction of reading-books as shall place the pupil in favourable circumstances for his arduous task. In the first place, and before everything else, there must be clearness of thought and expression. It may be a good exercise to follow a sequence amidst intricacy and disturbance, but the pupil must first be accustomed to clearness before he can be expected to make his way through a perplexing obscurity: this clearness does not supersede, but facilitates, the pupil's thinking. Another feature to be insisted on is the due balance of reasoning and illustration. This is not simply for the attraction and interest thrown around the subject by the latter, but because satisfactory and influential reasoning distinctly includes the two elements. The imaginative gives life and reality to the strictly ratiocinative. There must also be amplitude of statement in contrast to meagreness and dryness; it is the setting forth of the details or parts of an argument or illustration which constitutes the impressiveness of discourse. Again, the chains of thought must be graduated in length; and hence discourse in which there are well-marked divisions of thought, as indicated to the outward eye by paragraphs, should take precedence of long and complicated reasonings. It is evidently a

less effort that the pupil should first generalize the statements in one paragraph, and then in another, and so on, and through that series advance to generalization upon the sum, than that he should attempt to generalize on a sum which is not thus divided. The advanced reading-books should contain narratives of considerable length, to accustom the pupil to the analysis of continuous discourse. Finally, these features in reading-books should be exhibited in a sufficient variety of topics, to accustom the pupil to various applications of reasoning.

In stating what the features of reading-books should be, we have stated the nature of the exercise to be given the pupil; so that it has only to be added by way of recapitulation, that the elements to be discriminated are the propositions or things to be proved, the arguments or considerations which prove them, the illustrations which throw light on the arguments, and the circumstantial details of statement necessary to the due setting forth of all. The difficulty of comprehending discourse lies in the fact that the logical rank of its parts must be determined, while the mere language gives, for the most part, no clue to that rank. Grammatically viewed, the several sentences are co-ordinate in importance; in logical analysis they are not so, but have their respective positions as principal and subordinate within the paragraph, which are to be determined by regard to their import alone, and not their forms. In this exercise, it is the *method* of procedure that educates: the time which is occupied is a subordinate consideration, and so is the mere ability to reproduce the facts from memory. All the lessons cannot be handled in this way, it may be; but lessons should be so treated with sufficient frequency to make the pupil feel what this analysis is, and accustom him to its application.

119. Principles of Association.—The design of accustoming the pupil to the logical investigation of his reading lesson, is to send him away possessed of the instruments needful for methodizing the knowledge he acquires by reading, and not altogether unskilled in the use of them. These instruments of method, by which he classifies or generalizes the thoughts that pass under his notice, are the well-known 'principles of association;' to wit, the relationships of natural contiguity, resemblance or analogy, and causality. (1.) The principle of *natural contiguity* may be illustrated in its application to the arrangement of the facts of geogra-

phy and history. When we study the description of a country, we look for such associations as of its hills with its rivers, its rivers and its sea-coast with its towns, its groups of rivers with its slopes, its climate with its general aspect and its vegetable productions. When we read a passage of descriptive history,—the reign of a monarch, for instance,—we endeavour to grasp the succession of events, by referring them to certain universal stages in the life of every monarch and of every man : thus, his birth, education, early character, and accession ; his predilections, as peaceable or warlike, and the directions and progress of their manifestation ; the condition in which he left his people, and the circumstances of his death : such a scheme may be applied everywhere, and serves as a net to apprehend and retain the complicated details which history records. A somewhat similar scheme applies to biographical sketches of all kinds. (2.) The relation of *resemblance or analogy* may be illustrated by reference to the same branches. Thus we may apprehend a geographical description, by referring it to a similar scene with which we are familiar ; whether it be a country or a district, or an individual landscape whose minute features are given in detail, or the life upon its surface, or the appearance of its sky in calm or in storm. In history, we often find it necessary to classify the facts in one period by their similarity to those in another ; more frequently still is it instructive to arrange the incidents in the life of a public man in comparison with those of another situated in similar circumstances : this is resemblance. If we compare the lives of men given to different pursuits, but exhibiting under these the same qualities, which have led to equal success in their engagements, we have the relation of analogy, a most instructive one in history and biography, by which, indeed, it has very much of its weight as a teacher of morality and wisdom. This principle, both of resemblance and of analogy, finds wide application in natural history ; resemblance, in animals or plants belonging to same classes or species ; analogy, in those of different classes, showing how, *e.g.*, organs of respiration, locomotion, defence, etc., though as unlike as it is possible to conceive them, are yet only exhibitions of one great idea operating under widely various conditions. And, under this principle, we may place the relations of law exhibited in the phenomena of physical science ; the action of the heavenly bodies,

the phenomena of sunshine after sunset by reflection and refraction, the shape of the earth, the origin of winds and currents, have all their counterparts in familiar facts and appearances, which seem sufficiently remote from them in principle. (3.) By the analysis of our reading, according to the relationship of causality, we understand how, as a fact of geographical science, the occupations of a people are determined by the physical conditions of the territory they dwell in; in the higher study of history, we arrange the record of events by attributing the acts of men to their motives, and by tracing in the movements of nations the natural consequences of certain features that have previously characterized the national life; in the physical comfort and well-being of a people, we associate certain states of body or of mind with circumstances of their homes or their personal habits; we apprehend the doctrines of natural philosophy, as the shape and motions of the earth and heavenly bodies, the present condition of the earth physically considered, the properties of the atmosphere, etc.; and we grasp the bearings of special questions of morality or of public interest, and their true solutions, by discrimination of the arguments advanced, and the illustrations employed. Thus furnished, the mind of the reader is prepared to comprehend what he reads, and, by the same act by which he *comprehends*, to *remember* the subjects of his study. (§ 98.)

120. **The Expression of Thought.**—The ability to define our thoughts, and to express them in a clear, orderly manner, may be taken as a practical test of the character of our intellectual education. This is not less necessary for our own benefit than for that of others. If we do not in course of reading make it clear to ourselves how much of the discourse we understand, we have not the art of reading with thought, and we cannot read to purpose: there is no other way of doing this than to habitually express the author's meaning in language of our own. The expression of thought should therefore be regarded as a primary object in intellectual education. We have insisted on this in speaking of its earlier steps; thus, in training conception, the issue to which the process should be carried is *words;* in training the judgment, it is *propositions.* In harmony with this exercise of the faculty of language, is the habit of expressing in our own language *trains of thought.* Oral examination will suffice to

give the pupil sufficient practice in expression. But when he has attained some facility in reading and writing, the reproduction of ideas should be exacted from him in writing. The lessons he receives in oral instruction furnish the best and the first available materials for such an exercise, but the reading-lesson itself may be thus handled. The ground-principle of school exercise in composition therefore is, that it should be given in strict connexion, in the first instance, with the school instruction. The power of expression in other subjects, in which the pupil is left to his own thought and arrangement, should be deferred for some time : the common school may perhaps be unable to overtake it, as the exercise requires some maturity of mind. In so far as it can, the conditions of the exercise in subject and treatment are specified under the head of 'Composition,' in the section on Method. In all exercises of this sort, less importance should be attached to fulness of detail, than to the strict connexion and clear expression of ideas.

CHAPTER X.

THE TASTE.

121. Taste—Conditions of its Cultivation.—Taste is that faculty by which we appreciate what is beautiful in nature and in art.

The first condition of its cultivation is the presence of beautiful images with which it may become familiar from frequent contemplation ; for the eye, beautiful forms ; for the ear, beautiful sounds ; for the understanding, beautiful compositions. These are the materials which stimulate the faculty into exercise. But this condition is not enough of itself. For we can suppose a person living amidst the most beautiful scenes of nature, yet totally insensible to any pleasure arising from their beauty. If he do not observe and meditate upon the elements of the landscape, in the various aspects which it presents under the changes of season and of atmosphere, he will not associate beauty with any one element or any one aspect. There is a loose view of taste which looks upon it as a kind of inspiration—the treasure of a few, giving forth verdicts too authoritative to be inquired into.

There are differences of natural capacity in respect of taste, just as there are differences in all the bodily and mental faculties; but whatever the capacity, education alone can draw forth from it an actual power. A cultivated taste is something more than a strong natural intuition; it is the result of systematic observation and comparison. As such, its pleasures and its refining influences are, less or more, within reach of all.

122. **How far attainable in School.**—Taste has various fields for its exercise. There is the great field of Nature, with its inexhaustible richness of aspect: calling on men everywhere to gaze on its beauties and rejoice. There are the various fields of art, over which genius invites sympathy for its noble conceptions; whether robed in the colours of the painter, or embodied in the more enduring marble of the sculptor, or rising before us in the stately pile of the architect, or thrilling us with the harmony of the sounds linked together by the skill of the musician, or floating before the imagination in the rhythmic periods of the writer in prose or in verse. In every department of human labour, we see human art in search of the beautiful. It may appear incongruous, after this enumeration, to speak of cultivating taste at all in the common school. And doubtless it would be so, were its aim the high degree of taste necessary for criticism in art or in literature; for neither art nor literature belongs to its course. But there are various degrees of taste; and the design of the common school in respect of this faculty is neither ambitious nor unreasonable. It is not to carry the pupils beyond their sphere in search of a beauty which cannot dwell with them, but simply to open their eyes to what degree of it lies around them, and their imagination to appreciate it in what they hear or read of. No special course of instruction is needed for that, no interference with the studies demanded by their position, no change of the circumstances of their lives. The most ordinary materials may give all the stimulus that is needed, and keep it constantly acting: the little flower daily gathered to adorn home or school, the picture hanging on the wall, the sculptured stone in some beautiful building or from some venerable ruin, the melody sung, or the stanza read, by the voice which commands affection or esteem.

123. **The Observation of Nature.**—The child should be taught to observe the landscape in its shifting phases and its

various elements: the sun in the gorgeous freshness of the morning, the majesty of his noon-day strength, and the mild repose of his evening couch; the silvery moon, with her pale reflective light, alone in mid-sky or sailing through the transparent clouds; the rainbow with its glittering hues; the towering hills, the green and fertile plains, the waving forest, the eddying stream, the placid smiling lake, the ocean sleeping under the sunbeams or dancing with its freshened waves in the breeze; spring with its young life everywhere, summer with its matured brilliancy, autumn with its mellow richness, and winter with its hoary age; birds with their late and early song, quadrupeds with their playful motion or nobly developed forms; the massive king of the forest, the graceful shrub, the little flower which opens its eye on the green sward to the morning sun. It is a dull sense or a thankless heart which is alive to no beauty in these forms of existence, whether singly or in their ever-changing combinations. Formal demonstrations are not required; but, incidentally, in the course of ordinary instruction and conversation, the teacher, who has himself a sympathy with nature, may find constant opportunities, which, if skilfully improved, will foster a love of it in his pupils, and give them at the same time that habit of observation, in the exercise of which alone their taste can be developed.

Provided he engages the pupil with what is around him, he may increase the field of observation, by carrying their imagination abroad to scenes of beauty which they cannot see with the bodily eye. Nature in other lands is beautiful as in our own; it appears in different, and often in grander, aspects. Let him interest them in the majestic mountain range, the mighty rolling river with its accompanying animal and vegetable life, the brilliant hues of nature under a tropical sun, and in the individual objects innumerable, whether tree, or plant, or flower, which adorn every land. In doing this he will be able to support the effect of his own descriptions by the resources of pictorial illustration.

124. Influence of Reading-Books.—Next in power to the teacher's references in conversation and oral descriptions, should be reckoned the influence that may be exerted on the taste of the pupils by their reading-books. These should not be regarded exclusively as a channel for conveying information, and they should not therefore aim at condensation of scientific and historical facts as their

crowning merit. Whilst they continue to instruct, and for that purpose to draw their materials from all the departments of knowledge to which they have hitherto resorted, and to be exact in statement and logical in arrangement; they should be no less careful to provide for the nurture of the taste. If they describe the phenomena of nature, let them do so with something of a poetic feeling, that youthful sentiment may have a fine ideal to linger upon; if they expound the facts of science, let them not condense, but amplify and give to the unscientific understanding pictures which it can sympathize with and admire; if they exhibit passages of history, let them present not the dry chronicle of names, facts, or dates, but scenes which may stir the emotions, whether the struggle of a nation for its freedom, the trials of the patriot and the martyr, or the gentler incidents in the life of the benevolent and the virtuous. And we may reasonably require that a certain portion shall be occupied with poetry, which appeals pre-eminently to the taste, in which the aspects of nature and of human life are portrayed with depth and geniality of sentiment, richness of imagery, and purity of feeling. Both ends may be attained at once—the furnishing of the mind with knowledge, and the storing of the taste with beautiful images; these not only do not interrupt, they assist, each other.

125. **Influence of the Arts of Expression.**—The arts of expression should be specially cultivated in school, as a means of refining the taste. Of these we may reckon these three:—

Whilst reading-books constructed in the manner described will refine the taste of the pupil who reads solely that he may apprehend their contents, they will still more refine the taste of him who is taught to read with those qualities of elocution which constitute *expressive reading*.

Drawing requires a minute observation of the properties of beautiful forms. The presentation to the eye of many pictures as models, and the repeated effort to imitate them more and more perfectly, implies a steady growth of taste for beauty of form.

Tasteful *singing* implies a perception of the sentiments uttered in song, and of the adaptation of the tones of the voice to their expression. This art is specially available for cultivating the taste, since the sympathy of the youthful heart with song is all but universal. (§§ 78, 79.)

126. Advantages of Cultivating the Taste.—The advantages of recognising the æsthetic element in education are manifest:—

The love of the beautiful is part of human nature, and one of the evidences of its dignity. It should therefore be educated for its own sake, as elevating that nature, and increasing its means of happiness.

If the cultivation of this faculty does not imply refined moral perceptions, it is at least decidedly favourable to moral education, in so far as it exalts above what is gross and sensuous. And, supposing some degree of moral and religious culture to have been effected, that will find a greater outflow of sentiment when the perception of beauty in nature has been awakened, than when it is dormant.

Where there exists a love of the beautiful, its influence may easily be reflected on personal circumstances and habits. Cheerfulness, tidiness, cleanliness, and order, are immediately associated with the cultivation of the taste. For it is natural that we should strive to imitate in our own arrangements the qualities we admire in what we see around us.

CHAPTER XI.

PHYSICAL EDUCATION.

127. Object of Physical Education.—The object of physical education is twofold:—To preserve the health of the body, and to develop its strength and activity.

The conditions of health, so far as the school is concerned, may be distinguished into those which depend on the construction and management of the school-building, and those which depend on the constitution and management of the school community. The former must be provided, in the first instance, by the architect, though the teacher is by no means entirely dependent on him; for the latter, the teacher is himself responsible.

The chief sanitary provisions in the building are those required for regulating its atmosphere, light, and temperature. The school arrangements influence health through the teacher's daily inspection of the state and habits of the pupils, and through the amount and nature of the work he exacts from them.

The strength and activity of the body are developed, not merely by favourable physical circumstances for the performance of school-work, but by active exercises designed for that purpose.

128. Situation of the School.—Nothing can preserve health in a school which is situated in an unhealthy locality; we must assume, therefore, that the site of the school has been chosen after full consideration of its sanitary influences. It should be airy and of a good exposure, free from damps, whether arising from marshy soil or from artificial causes, and especially remote from the vapours of public works. The playground, which is part of the school, should be thoroughly drained, and kept in a dry state, with sufficient protection from cold winds and wet weather, and adequately supplied with offices. These conditions apply chiefly to schools in the country; of schools in town, more need not be said than that their situation should be as open, and should combine as many of the other requisites, as possible.

129. Necessity of Ventilation.—A chief cause of the sickness and mortality prevalent amongst children of the poorer classes, is the foul air they are compelled to breathe for so large a portion of the day in their close and overcrowded homes, at an age when their lungs require the most unrestrained action. The same cause does not operate to the same extent in school, because the pupils frequent it for a comparatively short period daily, and because the mere fact of school attendance implies a certain amount of exercise in the open air. But that it is operative to such an extent as to interfere with work, and even to injure health, is too plainly a matter of experience. Considering that they ought to teach the art of right living, that they have at hand a remedy for the evils in question, and that it is the tender age of childhood with which they deal, it would be difficult to name a single class of public buildings in which the laws of health, in so far as these depend on pure air, are more generally or more inexcusably violated than in schools.

An abundant supply of fresh atmospheric air is the first condition of health. Impure air sends noxious elements into the blood, of which the effects are felt through the whole system, in languor and weakness, disinclination to work, giddiness and headaches. The ordinary and natural cause of impurity in the air of a public room is respiration. After serving its purpose, the

air is discharged from the lungs, stript of its life-sustaining element (oxygen) to a large extent (about one-fourth), and charged instead with a life-destroying element (carbonic acid). Repeated respiration of the same atmosphere vitiates it still more and more, till it becomes unfit to sustain life at all. Necessary as fresh air evidently is, from its function in the economy of life, its necessity must be felt still more strongly when we become aware of the amount which is required for healthy respiration. If one hundred and twenty gallons (19¼ cubic feet) be the estimated amount needed for each individual per hour, it is surely evident that the supply of this fluid is not a matter which should be left to chance, or, as it is in so many cases, positively obstructed. This is the quantity required in the most favourable circumstances, that is, when the respired air is immediately carried off; but it by no means adequately represents the requirements of schools, for they are not in such circumstances. Not one in ten has the means of removing the air which has been used. Moreover, there is often more than respiration to contaminate the school atmosphere; for if the children come from poor homes, where personal cleanliness is not understood to mean more than a careless washing of face and hands, if so much, there is to be taken into account the effect of the exhalations from their skin and clothes, which vitiate the atmosphere scarcely less than respiration itself. Add to this the loss of oxygen in the winter season by combustion, particularly the noxious combustion of gas-light; and we have a series of influences at work which require not ordinary, but extraordinary, precautions to counteract them. These the teacher should study, as he values health, comfort, and success in his work. He may, in the strength of his constitution, be unconscious of any immediate measurable injury, or in his weakness he may be afraid to expose himself to the imagined danger of contact with the genial current, or he may have accustomed himself to personal habits so gross as to find pleasure in the warmth of a close apartment; but he will nevertheless feel its effects on his health in the end, and could he but be persuaded to indulge himself in the luxury of free ventilation, he could hardly fail to recognise its comfort, and to derive from it increased vigour in discharging his duties. In any case, let him spare the children, to whose young life the free air of heaven is the first of all necessities. Amidst the

increased attention that is being paid to this subject, he should not, by confining them within the poisonous stagnation of an unventilated school-room, proclaim his own ignorance or disregard of nature's laws, and his consequent unfitness to be intrusted with education at all. Health is the only sure basis of usefulness and happiness, and is therefore an object of education to which learning may well be content to give precedence.[1]

130. Expedients for Ventilation.—Proper ventilation requires the egress of the respired air and the ingress of fresh air. The technical apparatus which may best attain these ends falls within the province of the architect, and need not be referred to here. It is more to our purpose to urge upon the teacher to use them carefully, if they are provided, and if they are not, to resort to all the expedients in his power to remedy the defect. In the first place, his school should not be overcrowded.[2] He has means of ventilation, on which he can almost always rely, in the windows and doors of the school-room, which he should keep open more or less according to the season and the weather; taking care, however, not to expose a class to the drafts which always exist under an open window, or in the line between a window and a door. He should steadily turn the intervals of school-work to account, by leaving windows and doors open to their utmost during the whole time; and he should increase the frequency of the intervals, if need be, solely to renew the atmosphere of the room. Finally, he should keep the room and its furniture as clean as possible.

This matter of ventilation is one which requires not merely a passing thought in the morning, but which should be present to the teacher's mind during the entire day, and, we may say, especially in the afternoon, when the room has been occupied for some hours, and when the system is comparatively fatigued with the day's exertion.

131. Light and Heat.—Sun-light is indispensable to life, and the degree in which it is enjoyed, accordingly, influences the physical state in a very marked manner. Out of, or imperfectly within, the range of its influence, the body does not attain its

[1] Dr Andrew Combe's *Principles of Physiology*, chap. xxi.

[2] The minimum allowance of area for each pupil will appear in Part II. to be eight square feet in the principal class-room for each child in average attendance.

average strength, and the temperament lacks liveliness and energy.

The influence of light is equally marked in a school-room or other apartment, though on a comparatively small scale. Too much or too little of it fatigues the eye, and produces languor and headache. It is quite a common fault in public buildings, churches for instance, to admit too large a body of light; the drowsiness produced by which, especially if it fall directly on the countenance, all have experienced. It is most commonly in deficiency of light that error is committed. A school should be a cheerful place; and the children should not be required to perform their exercises in dingy corners, or away from the light.

Another condition of health in a school-room is proper temperature. In the winter season, the air must not be chill, else colds will result; and it is well if the derangement of the circulation produced by exposure to cold, particularly in the case of young children, does not lead to more serious maladies. On the other hand, the air must not be overheated. The object of heating any room at all is not to supersede, but only to aid, the natural heat of the body; all that is required is, that that provision of nature shall not be checked by a temperature low enough to give an abiding sensation of cold. If the body is accustomed to depend too much on an artificial temperature, its power of generating heat is weakened, and it becomes unable to resist the effects of exposure. Colds are the almost certain consequence of passing abruptly from an overheated room into the natural atmosphere. The average temperature of a room should be about 63° Fahr.[1]

132. Personal Condition and Habits of the Pupils.—There are two dangers to the health of the school, which it is very much in the teacher's power to exclude. The one is the admission or the retention of children in a state of disease, actual or incipient; the other is the undue protraction of school-work.

He ought not to receive any as pupils who, from general weakness of constitution, or from marked tendency to disease, would endanger their own health, or that of the school as a whole. He ought to know the symptoms of the common diseases of children, and be vigilant in his inspection to prevent them from invading school. He should require proof of vaccination. He should re-

[1] See chapter on Organization, Part II., chap. I.

gard such symptoms as shivering, unnatural heat of the skin, flushing of the face, inclination to sleep or lie down, unusual thirst, coughing, watering of the eyes, eruptions on the skin, pains in the limbs or elsewhere, and scratching of the body, as a warrant for inquiring into the pupil's condition, and for suspecting the presence of incipient fever, measles, small-pox, hooping-cough, ringworm, itch, or inflammation. The pupil who shows any of these symptoms should be sent home immediately, and not be allowed to return, in the event of disease actually showing itself, till he has been thoroughly cured; for infection is to be apprehended even during convalescence.

The personal habits of the children should receive the teacher's attention. Cleanliness is necessary to a pure atmosphere, as we have seen; but it tends to exclude positive disease. In poor schools, he will find it constantly necessary to be insisting on this virtue, with special reference to the pupils' skin, hair, and clothing. He may sometimes have to encounter a prejudice on the part of the parents, that its opposite is a sign or concomitant of health; he should use his influence to bring them to a better mind. He should, in fact, regard regular washing, combing, and dusting, as essential to a pupil's admission to school.

133. **Over-work and Over-excitement.**—The health may be injured from over-work of the mind, or over-excitement of the feelings.

The brain, which is the material organ of the mind, is, in early childhood, extremely sensitive from its partial development; and should, therefore, be preserved from excessive stimulus of every sort. Intellectual work is the most frequent cause of injury; no matter what its nature be, whether exercise of the memory or of the senses, or of any other faculty; and no matter whether this work be exacted in school itself, or prescribed for performance at home. "Teachers of youth," says Dr. Brigham, "appear to to think that, in exciting the mind, they are exercising something totally independent of the body—some mysterious entity, whose operations do not require any corporeal assistance. They endeavour to accelerate to the utmost the movements of an extremely delicate machine, whilst most unfortunately they are ignorant or regardless of its connexion with the body."[1] It is quite possible thus to

[1] Dr. Brigham on Health, sects. 1, 2.

accelerate the action of the brain, but the result is injurious in every way. It gives to that organ a present energy, which is not wanted, at the expense of that future energy for which it is formed; and, according to the law of the distribution of vital force, by drawing to itself an undue proportion of that force, it subtracts so much from other organs, and thus retards their growth. The nervous system, which centres in the brain, being over-stimulated at this sensitive age, will always remain irritably active and withal weak; it will come to dominate the entire system, and be itself beyond control.

Results of a similar nature are produced by over-excitement of the feelings, even still more rapidly. It is, therefore, of the first importance to the health, as well as to the moral character of children, to preserve them in early years from all violent passion, whether in their work or their recreation.

134. Length of School-hours.—The length of time during which children should be kept in school daily, is a point which depends partly on the nature of the school-work, and partly on the physical circumstances of the school-room. If a class be constantly under vigorous direct instruction, the time of its school attendance should be shorter than when it is occupied, as classes generally are, partly in direct instruction, and partly in the performance of exercises which make a less demand on the vital force. If the school-building be well lighted, and abundantly supplied with fresh air of the proper temperature, a class may perform an amount of work, measured by time as well as quality, which, under less favourable circumstances, would exhaust its energies, and, therefore, if daily repeated, injure its health.

In this country, the maximum daily attendance of the younger children is four hours; an amount which should certainly never be exceeded, and which can be justified only by a most judicious conduct of their work on the part of the teacher, and by a thoroughly satisfactory sanitary state of the school-premises. To give such children that amount of close intellectual work—*schooling*, in the ordinary sense of the word—would be preposterous. For the elder pupils, the average time of instruction is five hours daily; a most liberal allowance for all the purposes of elementary education, if only it be continued over a sufficient period. If the engagements of the common school admitted of the teacher's

attention being concentrated upon one class, it would not be necessary, or even safe, to protract them for so long a time. The school-work, however, does not consist of continuous mental exertion, but is relieved by breaks and exercises which do not strain the mind; so that the arrangements in general use are not attended with any bad effects on the pupils' health.[1]

135. **Postures during Instruction.**—The teacher should observe the postures assumed by the pupils in the performance of their various exercises, so as to prohibit any which might injure health. "It is important," says M. Rendu, "both to the physical development of the children, as well as to the order and regularity of the school, to give to all a correct personal carriage. There are many pupils whose frame, without becoming deformed, is sensibly bent by the bad habit of crossing the legs, in placing the one knee over the other, and by keeping the right shoulder always higher than the left in writing. The teacher should watch that the children be at all times properly 'set;' their feet beside each other, the body parallel to the table, and the elbows on the same level. All stooping forward of the body in writing should be forbidden, and leaning of the chest on the edge of the desk, accompanied by a throwing back of the legs: this is a very common, but very bad, posture; everything which tends to compress the lungs, especially in childhood, is injurious."[2] Children should not be confined to one position; protracted standing, or protracted sitting, especially in benches without support to the back, leads to distortion of the body, and is the cause of much uneasiness, and even suffering.

[1] The Royal Commissioners of 1858 report concerning this subject, "That the evidence on the whole tends decidedly to the conclusions:—1. That for children under the age of twelve years, twenty-four hours a week is nearly the limit of profitable instruction in studies requiring mental effort. 2. That eighteen hours a week is often a more useful period of mental effort than twenty-four. 3. That fifteen hours a week, the utmost that is obtained by the factory children, is, to use the most unfavourable expression, not insufficient. 4. That much may be done in twelve hours a week, or two hours a day, provided that those two hours be two fresh hours in the morning. 5. That children who have been educated up to the age of seven in a good infant-school, can be taught in three years, in a school attendance of from fifteen to eighteen hours, to read well, to write well, and to understand and apply the common rules of arithmetic."—*Report*, Part I. chap. iii. sect. 3.

[2] The subject of physical education receives greater prominence in French and German works on Pedagogy than in those of this country; see, *e.g.*, the concise but excellent *Cours de Pédagogie*, by Ambroise Rendu, from which this extract is taken.

136. Out-door Exercise.—Various parts of school-work have a salutary influence on the health. Thus reading aloud and singing tend to strengthen the lungs. Exercises of a physical nature may be mingled with those which are purely intellectual; the younger children may be practised in marching and in manual motions, and, under a capable teacher, the older pupils might well receive instruction in the elements of military drill.

It is active out-door exercises, however, that we have in view as pre-eminently the means at the disposal of the school for developing the strength and activity of the pupils. We do not refer to the walking which all should be encouraged to practise in their leisure hours; this may be beneficial, but it is not an occupation with which the ardent spirit of youth will be content. In out-door sports alone will it find the means of vigorous health; for which purpose every school should have its playground, and every teacher should interest himself in its engagements. These have the great advantage of being carried on in the open air; but their chief recommendation is that, being voluntarily taken up by the pupil, they are sustained by the influence of the mental excitement which is implied in striving with a purpose. This influence is necessary to all beneficial recreation; in truth, what are called *physical exercises* require, as the first condition of their utility, an exercise of mind and will. Of such exercises children can hardly have too much; but as they are apt to be prolonged under temporary excitements, so as to entail undue fatigue, the teacher, whilst avoiding the appearance of dictation or interference, has here opportunity of interposing with his advice to regulate their amount. Bodily exercise will injure rather than strengthen the system, unless it be kept in proportion to the strength and habits of the individuals who engage in it.

Each school has generally its favourite recreation, but variety should be studied in order to exercise the various muscles of the the body. Walking is most useful when performed with some object in view, such as the gathering of wild-flowers or shells; and there is no application of it half so invigorating either for lungs or muscles as climbing in hilly districts. Running, in moderation, is akin to climbing; the numerous games which involve it, such as foot-ball, hoop, skipping-rope, and the like, should all be encouraged, and that under the stimulus of gentle

emulation. But the necessary cautions should be given to prevent excessive fatigue, and the dangers which may be incurred by exposure to cold or by drinking, in a state of perspiration resulting from violent effort. Sliding on the ice is everywhere a favourite, as it is a most valuable, exercise ; the pure air, the bracing frost, the excitement of the motion, and the muscular exertion, all suggest that it should be provided for in the playground or other safe place. If the teacher have it in his power to encourage the art of swimming, he should not lose the opportunity ; as well because of its utility, as of its influence on health in respect of exercise and cleanliness. Certain gymnastic motions are easily practicable in school, with the aid of simple apparatus ; amongst them may be named, pulling with a rope, high-leaping, climbing a rope or pole, and balancing on a plank above the ground.

Of all these exercises, it may be remarked that they are not less valuable for the strength and agility which they give, than for their influence in promoting a good state of feeling throughout the school. It sometimes happens, when pupils are left entirely to themselves, that dissension and ill-feeling intrude into what should be eminently a field for the display of kindly and generous feelings. To prevent this will not require much effort, and should not be made a pretence for constant interference on the teacher's part ; which, however necessary with the youngest children, is neither called for nor judicious with the pupils of the common school. Where there is a cordial state of relation between teacher and pupils, an occasional glance at their recreations, and an incidental word of encouragement or caution, will give him all the control over these which he needs to have. Any of the pupils who act in an unneighbourly and overbearing spirit in the playground, will be sufficiently punished by exclusion for a time from all its engagements.

The necessity of instruction in the laws of health has already been insisted on (§ 70).

PART II.

SCHOOL-MANAGEMENT.

CHAPTER I.—ORGANIZATION.

137. Object of School-Organization.—In conducting the education of a single pupil, the teacher has but one thing to do at a time, and has no difficulty in keeping him constantly employed with subjects and modes of study suited to his advancement. In conducting a school where many pupils are assembled, differing in attainments as in years, he has to carry on the instruction of several classes at once. To accomplish this he must provide constant and suitable employment for all, whilst he gives his undivided attention to each in turn. The department of the teacher's art which shows him how this provision can be made, is commonly termed School-Organization.

The bearing of the organization upon the instruction of the school is very clear. A good organization enables the teacher to perform the greatest amount of work in the time at his disposal; it supplies the conditions required in order that his instruction may attain its highest efficiency; and it puts the pupil in the most favourable circumstances for exertion. The bearing of organization upon discipline, though equally important, is perhaps less apparent. A good organization not only surmounts the natural obstacles to discipline presented by a school, but transforms them into aids thereto. The constant employment which it affords to the pupils, saves them in great measure from the temptations arising from idleness and confusion, and puts them in the most favourable circumstances for good conduct. But though it is the basis of good discipline, it does not of itself constitute discipline. Nor does the faculty for organization imply the faculty for discipline; the one is a mental power, the other chiefly a moral. And so the perfection of mechanical arrangement may exist in a school, without the exhibition of any of that

moral force and insight, in which the power of governing lies. This matter of organization is so apt to be either undervalued or overvalued, that nothing in the teacher's art is more deserving of his careful attention: a just idea of its place and power will save him from much error, and his pupils' interests from much injury.[1]

Under organization we have to consider the following topics: —(1.) The Nature of the Teaching Power; (2.) The Arrangement of School Furniture; (3.) Classification; (4.) Time-Tables; (5.) Registration; and (6.) Apparatus.

I.—THE NATURE OF THE TEACHING POWER.

138. Organization where the Teacher is unaided.—The simplest form of organization exists where the teacher is alone with his pupils. The principle of its working is, that he takes one class at a time for direct instruction, but maintains such a superintendence over the others as to oblige them to occupy themselves with some prescribed work, it may be with learning a lesson, it may be with an exercise on a lesson already heard. The instruction given in these circumstances, being entirely in the hands of the teacher, will probably be good *so far as it goes*; and the discipline may for the same reason be expected to be judicious. But this organization is open to the following objections:—The teacher cannot give his whole mind to the instruction of the class before him; he must often stop to attend to the wants of the other classes. He cannot provide the several classes with constant and suitable employment; from the conditions of the case, his methods of instruction must be limited in their resources. The discipline of the school will probably involve many artificial requirements: and, to obtain the necessary amount of orderly self-exertion from the classes, must be harsher in its tone than good discipline should be. Whilst, over and above these objections, there is this fatal one, that the limits to the application of this organization are exceedingly narrow. Whatever results it may attain in a small school, it is, even with the largest daily expenditure of labour which the teacher's strength can give to it, inefficient in a large one, if not entirely impracticable. The more flourishing the school becomes numerically, the less is its effi-

[1] Abbott's *Teacher*, chap. ii.

ciency; for the amount of time that can be devoted to each class will gradually diminish, till it reach a point at which hardly any appreciable effect of instruction can be produced on it; and the discipline must deteriorate with equal rapidity. We conclude, then, that this organization is tolerable only in a small school. It will never be deemed satisfactory where organization has been a subject of study, and where financial considerations admit of any other.

When the school exceeds certain limits, the teacher needs assistance to conduct it efficiently. Only two kinds are possible: adult skilled assistance, and the assistance of pupils or monitors. All the forms of organization which have been tried, except the one already mentioned, may be classed into two groups, according as they employ the one kind or the other. We shall first notice organization by the aid of skilled assistants.

139. **Organization by the Aid of Skilled Assistants.**—The fullest development of this organization is when each classs has a teacher—and it may be a class-room—exclusively for itself. Provided the several classes are not too large for one individual to influence and to teach thoroughly, this is the best possible form of school-organization. For they are constantly and suitably employed, either in receiving direct instruction, or in performing some exercise under immediate superintendence; they are under the government of one who may be supposed to act with authority and judgment; and the daily contact of teacher and pupils is such as to enable the one to know the mental habits and the dispositions of the other, and to adapt his measures to these with certainty. We find this organization existing in two varieties: either one teacher has charge of one class for all subjects, or a class goes to different teachers for different subjects. With younger pupils the former is to be preferred, from its better affording that unity of discipline and instruction which they so much require; with advanced pupils, to whom this is not so much a necessity, the latter is preferable, since we may look for greater skill in instruction when a teacher is allowed to devote himself to one subject. This form of organization is for the most part beyond the means of the common school, and is found only in the higher class of public or private academies.

140. **The Organization of Graded Schools.**—The next organi-

zation to be mentioned is one which, recognising the necessity of skilled teaching, seeks by its manner of classifying the pupils to preserve for the common school as much of the advantage of the previous organization as possible. Suppose that a school, instead of being divided into classes in the ordinary way, is divided by grades or degrees of progress, and that in each grade there are eighty or a hundred pupils, it may command the services of a skilled teacher for each grade. Schools on the so-called 'Training System' exemplify this organization 'by grades.' But whilst we cannot but sympathize with its desire to have the benefit of skilled teachers, it is obviously liable to objection. (1.) Though each grade has a skilled teacher to itself, the conditions of his work are entirely changed by its excessive number of pupils; hence the important part which collective instruction plays in this organization. But "how efficient soever such instruction may be in imparting general information, and in enabling us, by calling out the sympathies, and simultaneously exercising the faculties of large bodies of children, to make upon their minds strong and lasting *general impressions*, we must have recourse to arrangements of a totally different nature for the accomplishment of all that is really difficult in the management and technical instruction of a promiscuous school, consisting of children of various ages and at different stages of progress." (2.) Such schools can be planted only in districts where there is a very large population; so that this organization is not available for the ordinary type of common-school.[1]

141. Monitorial Organization.—The Monitorial Organization, or system of Mutual Instruction as it is also called, was first applied in England, under the rival auspices of Bell and Lancaster, about the beginning of the present century. Its peculiarities were these:—Monitors, averaging ten, eleven, or twelve years of age, according to the general age of the pupils, were provided in sufficient numbers for all the classes of the school, and for its routine business besides; though chosen from among the pupils, they had a distinct status as teachers; they were, in fact, the ordinary teachers of the school under the master, whose duty it was to superintend their work, direct their methods, and supplement their teaching, but who was not attached to any particular class; where the

[1] Stow's *Training System*; *Min. Coun.*, 1841-2, p. 14; 1848-9, p. 260; 1857-8, p. 558.

system was wrought out in an enlightened spirit, they received from him instruction in their own studies privately, and a small remuneration for their services, partaking of the nature of a reward rather than of an equivalent. The facilities which this system afforded in the conducting of large schools at once led to its general adoption in England. In respect of instruction, it put into the teacher's hands the means of occupying constantly all his classes, however numerous; in respect of discipline, the fidelity, industry, and regularity of the monitors were felt to influence the character of the pupils beneficially; whilst—and this was its greatest recommendation—it was within easy reach even of the poorest districts. As the first step that was taken towards a scientific organization of labour in the common-school, it is no disparagement to it to say that its great merit lay in having suggested something better. For in itself it never could be an efficient system. The instruction of a monitor is wanting in clearness and unity of purpose, as well as in general intelligence; and his influence is wanting in authority. There can be no education worthy of the name where there is not a matured mind and an unquestionable and respected authority brought to the work. However much the support of a vigorous master may avail to carry his monitors through their routine work of hearing tasks, or to aid them in maintaining external order, it cannot lend them the power of exciting and guiding thoughtfulness in a class, or of wielding a moral as distinct from a mechanical authority. The monitorial agency fails utterly, therefore, for the higher purposes of the school; for which its economy and great show of work cannot be accepted as any compensation.

142. Uses of Monitors in School.—But though the monitorial system, as originally put forth, is inefficient, monitors may be used for various purposes in a school with great advantage, and in connexion with any organization. Their sphere of usefulness is correctly set forth in the following extract:—

"*a.* With reference to the external business of the school, there can be no objection to the intrusting of the necessary duties and arrangements to selected pupils. The performance of these duties, combined with the feeling of responsibility from the trust reposed, is calculated to exercise on such pupils a beneficial influence.

"*b.* In monitorial examination, where the examiner and the examined

do not differ very widely in standing, it is advisable to limit the exercise to such subjects as are in their nature exact and defined, and which do not therefore demand in their treatment and investigation the exercise of directing mental power. Such are lessons in [reading], spelling, recitation, geographical localities, and the simpler parts of grammar, as well as arithmetical sums. Where mutual examination is attempted on any subject not of the nature specified, it will generally prove desultory and unconnected, the examiner not adhering to any systematic or consistent order, but becoming discursive, and selecting questions, not on account of their pertinency, but on account of their difficulty.

"*c.* The question whether, and to what extent, the higher departments of teaching, such as the investigation of a lesson or the giving of information, may be intrusted to a monitor, must be determined by the teacher upon a consideration of the monitor's powers. The answer will in general be dissuasive of the experiment, as the instances are rare in which the services can be obtained of a monitor sufficiently advanced in years and information to be intrusted with a duty so important.

"*d.* To whatever extent the teacher avail himself of the aid of monitors, he will keep it always under his own immediate and active superintendence, and suffer it only to be supplementary and auxiliary to the personal teaching daily bestowed by himself on each class."[1]

143. Organization by Pupil-Teachers.—The system of Pupil-Teachers, established under the Minutes of the Committee of Privy Council on Education, stands in strong contrast in all essential particulars to the monitorial system on which it is based. The five years' apprenticeship which it requires secures a steady continuous service from the assistants, whilst the instruction and professional training they receive during that period may well be supposed to fit them for taking part in the higher work of the school, and for exercising a rational authority over their classes during at least the latter half of their engagement. These provisions give to it somewhat of the superiority over the monitorial system, which a trained agency has over an untrained. Two objections have been urged against it, neither of which, however, is of a nature to impugn its merits when applied in ordinary circumstances. Where a school is exceedingly large, requiring the assistance of say six or more apprentices, it is urged that the proportion of skilled to unskilled labour is too small; that one centre

[1] Pillans' *Rationale of Discipline;* Wood's *Sessional School; Dick Bequest Report*, 1844; Bell's *Madras School; British School Manual; Min. of Coun.*, 1844, vol. ii. pp. 184, 346, 510; 1845, vol. i. p. 244; 1846, vol. i. p. 171, and vol. ii. pp. 64, 70.

of influence is not sufficient to animate so large a body, and that the matured mind of the teacher does not come sufficiently into contact with all his classes to leave any impress upon them. There is certainly justice in the objection when put in this form. The second objection to this organization is urged, not upon the merits of the system at all, but on the ground of its great expense.

As this organization is now, and may continue to be, widely prevalent in the country, the teacher should know how to make it as efficient as possible for his purposes. He should therefore be careful, in the first place, to select no candidates for apprenticeship except on the following conditions:—That they be of sound bodily health, and of orderly and becoming habits; that they be of good character, of an earnest, modest, and cheerful disposition, and come from homes where these virtues are impressed; that they be apt to teach, and have a decided liking for the work to which they aspire. After these, good abilities and attainments should be taken into account; but a candidate should never be chosen for his intellectual qualifications alone, considering that the success of the elementary teacher depends mainly on his moral character and his disposition. The teacher should be careful faithfully to discharge his duty to his apprentices after their appointment. This is so far prescribed to him by statute. He should give them to the full the specified private instruction, and at a suitable time of day. They need it very much for the work before them; moreover, if they are not trained to application and thoughtfulness at this critical period of life, it will not be easy to instil these habits afterwards. Being charged with their professional training, he should, as they gain experience and ability, accustom them to various departments of teaching and school management, not less with a view to their future usefulness than to the present welfare of his own school; he should explain to them what he wishes them to do, and how to do it; he should ascertain that they prepare themselves regularly for their work, and punctually perform it; he should watch them frequently in their efforts, encouraging them on success, or pointing out the causes of failure; and he should allow them at stated times to witness his own procedure as an example. Further, he should train them to the exercise of authority, by exercising a mild and

firm authority over themselves; by restraining them (particularly in the matter of rewards and punishments) from incurring responsibilities to which they are unequal, whilst he devolves upon them such as they are able to bear; by taking them into his own confidence, and showing before all his pupils that he respects them in their position as teachers. But his moral obligation to them is of still wider range than his statutory. He should consider himself bound to promote their welfare in all respects by every means in his power. He should therefore interest himself in their occupations, *e.g.*, by advising them as to their private reading; and he should seek to foster in them correct tastes and habits of study, and to direct these into channels from which they shall afterwards be able to draw for professional purposes. He should be their friend as well as their teacher; watchful of their general, not less than of their professional, character; and whilst he sets them an example of life and conduct which they may imitate, he should strive to have such an ascendency over them that they shall with respect and good-will follow the example which he gives them.[1]

144. Mixed Organization of Assistants and Pupil-Teachers.—A better organization than any of those which have been mentioned as attainable by the common school, would be one which should procure for the teacher the services of adult skilled assistants combined with pupil-teachers. This mixed organization would be nearly as much in advance of the pupil-teacher system as that was upon the purely monitorial; and the fact has been recognised in the later Minutes of the Committee of Council on organization. That of May 1859 requires a master or adult assistant for every four apprentices employed. Such an arrangement is designed to meet the objection which has been urged against the pupil-teacher system, by providing more than one centre of enlightened influence in the conducting of large schools. It secures a greater amount of matured intelligence for the higher departments of teaching, whilst it leaves abundant work for the apprentices in discharging less responsible duties, for which they are fully competent. Add to this that it affords means for making the education of the apprentices themselves somewhat

[1] *Min. Counc.*, 1846; Minute, 25th Aug., and Minute, 21st Dec. 1847-8, p. 61; 1848-9, pp. 31, 40; *Report Educ. Commission*, chap. ii. sect. 2.

more effective than it is at present, by requiring the assistant to devote a part of his time to it: this advantage would be cheaply purchased even by deducting an hour from the time they now spend in daily teaching. If the proportion of adult assistants were made one to three instead of one to four, the organization would probably be as nearly perfect as the case admits.

It should be considered indispensable in all mixed schools, however, that one of these assistants should be female, to conduct the industrial instruction of the girls, and to take a large, indeed the principal, share in the general instruction of the younger pupils.

145. Tripartite Order.—The tripartite order of work contemplates the following arrangements. The subjects of instruction are divided into three groups:—(1.) Those which require thoughtful exposition, such as the Bible-lesson, the investigation of a reading-lesson, the principles of grammar and arithmetic, certain parts of geography, and the oral lesson, designed to convey general information; (2.) Reading, with spelling and the more mechanical parts of instruction; and (3.) Desk-lessons, such as writing, slate-arithmetic, and drawing. To correspond with this threefold division of subjects, the pupils are divided into three groups, and the school into three compartments, separated from each other if possible, and fitted with suitable furniture. If we suppose that one of these groups is engaged with reading at the opening of school in the morning, in small sections under monitors or pupil-teachers superintended by an assistant, at the end of the hour it would pass to the gallery for oral instruction from the master; which consists in an examination of the results of the previous hour's reading in the first place, and then of those lessons which the master retains in his own hands: and during the third hour it would go to the desk for writing, practice of arithmetic, and drawing, under a pupil-teacher or assistant. The second and third groups make a similar alternation of subjects, commencing with different ones. This whole order is repeated in the afternoon. The master may at his discretion change work at any time with an assistant or advanced pupil-teacher. The design of this order of work, and its great recommendation, is the just manner in which it distributes the labour of the principal and the subordinate teachers. The pupil-teachers and monitors are em-

ployed in the more mechanical parts of instruction, yet under full check; the teacher and his assistants in those which require directing thought: and, in particular, all departments of the school come under the daily instruction of the teacher himself, for a period long enough to warrant him in hoping that the various divisions of the school shall progress equally, and that his matured mind and authority shall finally leave their stamp upon the whole. The system is not less ingenious than solid for schools which admit of its application. But these are not many, for two reasons: (1.) A certain threefold structure of school-room is required to carry it out; so that the bulk of existing schools are shut out from even attempting it. (2.) A certain constitution of the school community is also necessary. In a school attended by children of all ages from five to fourteen, its threefold classification would be quite inadequate. It can only be wrought out to good purpose where attendance commences at the average of seven (the infants being otherwise provided for), and ceases at the average of ten or, at most, eleven. In fact it applies in strictness to schools for children of the labouring classes alone, whose school career is of the shortest. If it were attempted in a school where the attendance is prolonged beyond that limit, a subdivision of the oral instruction would be required, from the difference of standing which would necessarily exist amongst the pupils of the most advanced group. It may be added that a similar subdivision must be adopted, whenever the number of pupils in each group exceeds that to which a skilful master can effectively communicate instruction at once, that is, from sixty to eighty.[1]

II.—ARRANGEMENT OF SCHOOL-FURNITURE.

Of the forms of organization which have been mentioned, some require a peculiar arrangement of school-furniture, and are impracticable with any other; whilst others can adapt themselves to various arrangements.

146. Arrangement of Graded Schools.—In the system of graded schools, which deals with the pupils in large groups, the gallery is an essential feature. Each group has a gallery for itself, in which it receives its collective instruction; the sections

[1] *Min. Counc.*, 1845, p. 250; 1848-49, p. 18.

for reading may be drawn up round the unoccupied walls; the desks for writing may be placed either round the same room, or, by preference, in a room adjoining. From the important part which the gallery plays in this system, it is sometimes, though loosely, called the 'Gallery system.'

147. Arrangement of Monitorial Schools.—The monitorial organization is not tied down to any peculiar arrangement of furniture; provided only all the classes meet in one room where they may be under direct superintendence. But the arrangements with which it was associated were commonly on one or other of two plans. According to the one, the school-room was of an oblong shape, with a narrow raised platform at one end, whence the teacher might survey the whole school in operation. Round the three remaining walls there was a clear space of about six feet in breadth: here the monitors drew up their classes for instruction, facing the wall; on which were fixed or suspended black boards and other apparatus. The interior space was covered with parallel desks and benches, facing the teacher's platform, sufficient to contain the whole pupils: of which each class had its allotted share. Thus the standing and the sitting positions of each class were quite adjacent: and consequently the changes were performed with little noise or confusion. This was the Lancasterian arrangement, generally adopted in England in the British schools. According to the other plan, the school-room was of an oblong shape as before, with a desk for the master at some convenient spot: the classes, which were larger than on the Lancasterian plan, were arranged over the floor, each in seats which together formed three sides of a rectangle or square: the writing desks were ranged round the walls. This was the Bell arrangement, generally adopted in England in the National Schools, and, for the most part, in the few monitorial schools instituted in Scotland. As the monitorial system did not contemplate collective instruction, no gallery was provided in either arrangement.[1]

148. Arrangements for the Pupil-Teacher Organization.—The organization by pupil-teachers is likewise practicable under various arrangements of furniture. It has adapted itself to both of the monitorial arrangements, either in the original forms of these, or

[1] *Min. Counc.*, 1839-40, Minute of Feb. 20, and Appendix of Plans, 1846, vol. ii., Mr. Fletcher's Report.

with modifications; and it is found working in schools of almost every variety of construction. For new schools, however, the Committee of Council on Education have indicated a special arrangement, as being in their opinion better suited to the purposes of this organization than any other; of which the following is an outline. Let there be an oblong room as before. Then for the several classes are provided as many groups of three parallel benches and desks not exceeding twelve feet in length, disposed along one of the side walls, so that the pupils, when seated, shall face the opposite wall. Seated at these desks, the class performs all its written work, and may receive instruction of any sort; but it is occasionally drawn up in semicircular order in front of the desks. Each of these groups of desks is separated from the adjoining one by a narrow space, in which is hung a curtain; so that any two adjacent classes can readily be thrown into one for collective instruction. These are the arrangements for a school of moderate size. For a large school, one or other of two plans is proposed:—(1.) Either that the breadth of the room should be sufficiently increased to admit of such groups of benches being placed along both walls, yet leaving space in the centre for drawing of the classes on the floor; or (2.) which is preferred, that two such oblong rooms as that just described should be placed at right angles to each other at their ends. The explanation of these arrangements is contained in the following sentence:—"The main end to be attained is the concentration of the attention of the teacher upon his own separate class, and of the class upon its teacher, to the exclusion of distracting sounds and objects, and without obstruction to the head master's power of superintending the whole of the classes and their teachers." There is one feature in which the arrangement of schools on this organization differs from that on the monitorial, viz., in having a separate smaller class-room attached to the main room, furnished with a gallery; into which one or two classes may retire to receive some special lesson from the master or an advanced pupil-teacher. Such a room may be used with exceeding advantage, and should be provided in all new schools.[1]

The mixed organization by adult assistants and pupil-teachers

[1] *Min. Counc.*, 1844, Appendix of Plans, 1851-2, 'Memorandum on Organization,' 1846, vol. i., Mr. Mosley's Report.

may be wrought out with the same school-arrangement as when there are pupil-teachers alone. But the full advantage of the adult assistance is not reaped unless there be a separate class-room attached to the school.

149. Arrangements from Tripartite Order.—A school requires to be specially arranged for the tripartite order of work. An ordinary school-room of oblong shape might be adapted to it in this way. Let it be divided into three equal compartments, separated by curtains from each other; let the middle compartment be fitted with parallel benches and desks for the silent lessons in writing, drawing, and slate-arithmetic; of the remaining two, let one have a gallery for oral instruction, subdivided if necessary, and the other be furnished with seats for small drafts engaged in reading. From a raised desk or platform at the end of the room the teacher can superintend the hourly changes. It is preferable however to have a separate room for the oral instruction, to avoid that distraction which interferes so much with its effect; in which case the room should be closely connected with the other parts of the school, to avoid undue loss of time in making the changes.[1]

150. General Rules for arranging Furniture.—For that very numerous class of schools which have not been built with a view to any definite organization, it may suffice to mention a few general rules for arrangement which the teacher may apply in his own case so far as practicable:—(1.) Classes should be sufficiently apart from each other to prevent mutual interruption. (2.) Collectively, they should be placed in the best position for the master to superintend from his own standing-point. (3.) Each class should be so disposed that its teacher's eye can take it entirely in at one glance, whether it be in a straight line, or in a semicircle, or in parallel rows, or in three sides of a square. (4.) Any changes of position for different lessons should be within as small a space as possible. (5.) Writing desks should not be placed round school-walls, but in parallel rows facing a black board, so as to admit of giving instruction to a *class* in that subject as in others. (6.) The less the space occupied in any arrangement the better, provided it is effective.

[1] *Min. Counc.* 1845, vol. i.; Appendix of Plans, 1851-2, p. 312; 1853-4, p. 310.

III.—CLASSIFICATION.

151. Object of Classification.—The object of classification is to arrange the pupils into groups of such size and similarity of standing as shall facilitate their progress under instruction. Different principles of classification are recognised in schools; in some there is one classification for each subject or each group of subjects, in others one classification serves for all. The general test of classification is, of course, the pupil's attainments, but this must be taken in connexion with his intelligence as indicating his probable power of advancing, and in certain circumstances it must be modified by a consideration of his age.

152. The Manifold Classification.—All the subjects of instruction may be considered as different; in which case each may be taken at the same time over the school, with an arrangement of classes peculiar to itself. "This practice sometimes proceeds from the circumstance that separate charges are made for different subjects, and sometimes from the notion that pupils should be classified in each subject according to their knowledge of each subject respectively." But the principle of charging so much *per subject simply* is now almost universally abandoned in the common school, from the obstacles it throws in the way of the education of the people; whilst such a view of classification must be regarded as extreme, as not being attended with any advantage adequate to compensate for the inconvenience of so frequent daily changes in the classes, and even as interfering with intelligent teaching, as when, *e.g.*, grammar is taught separately from the reading lesson.

Much more common is that classification according to which all the subjects of instruction are divided into three groups: English with grammar, geography, and bible-knowledge, forming one; arithmetic and its applications a second; and writing and drawing a third. Thus during one part of the day the school is an English school, and the pupils are occupied with the English lesson and those others which are reckoned as cognate with it; during another part of the day it is a school for arithmetic and its applications; and during the remainder it is a school for writing and drawing. This classification, which considers *as the*

same those subjects which exercise the same talents, enables the teacher to distribute his pupils with all desirable exactness according to their aptitude and proficiency in the several departments of study, and so holds out to him the hope of a better progress; whilst it gives him the means of a more effective superintendence of each department, inasmuch as he sees its whole connexion of parts at the same time.

Perhaps still more common is that classification which groups the various subjects round two centres only. It recognises the school as in one part of the day a school for English and allied branches, and at another a school for arithmetic; the writing and drawing it combines either with the one or the other, considering no special classification necessary for it. Whilst recognising the propriety of arranging the pupils according to their talents for the several subjects, it seeks to avoid any complication of class arrangements that does not seem to be imperatively required.

153. The 'Single' Classification.—One step further brings us to the single classification, in which no distinction is made in the classes on account of the several subjects of instruction. This and the previous qualifications are a consequence of the different views which may be taken of the object of the common school. We may consider, on the one hand, that education consists in developing individual talents specially in the direction in which they themselves incline, and that therefore from the first each pupil should be so placed in the school that the instruction addressed to him should be as minutely adapted as we can make it to his several talents: this view naturally leads to the adoption of the complex classification in one or other of its modifications, or we may consider, on the other hand, that whilst this view is correct with regard to education on the whole, and must be recognised in all arrangements made for the higher education, it must be much modified in the case of the common school; that there this special development of separate talents has comparatively little room to show itself, and that in point of fact it is only within narrow limits that it does show itself; that a pupil who is ranked with a certain class on a consideration of its average advancement in different subjects, can hardly be so far behind in any one as to make it a difficult thing to bring him up to the standard of the class by a little additional attention bestowed

upon him for a time; that the design of the common school is rather to advance the pupil equably in the several branches than to foster a special talent for any one; and that the best way to attain this is to adopt but one classification, in which the example of the more advanced pupils is a powerful stimulus, over and above the teacher's influence, to the progress of all: this view naturally leads to the adoption of the single classification. We are disposed to think that it is preferable, after having formed the classes on a certain criterion, to preserve them fixed, so as to make it possible to give each class a definite character, and inspire it with a common spirit. Granting that the complex classification has an advantage over the single, in respect of its more exact adaptation of study to the pupil's attainment, it is doubtful if that is not more than counterbalanced by the enfeebled motives to exertion which those must have, who are not members of a distinct class, but who are for one subject in one class, and for another in another. But it is unnecessary to judge between the two in any such sense as to condemn the one while approving the other. There is truth in both of the views on which they are respectively founded: both can plead an equal weight of authority, and both can claim to be successful in practice.[1]

154. Test for the Manifold Classification.—According to this classification there is a separate test for each subject or group of allied subjects. Thus the 'English school' will be divided into so many classes, each associated in the teacher's mind with a certain stage of progress in language. His first or youngest class (not to reckon infants) will detain the pupils till they can read easy sentences, *i.e.*, sentences made up of familiar words and containing not more than three members, and can spell monosyllabic words freely: his second, till they can read sentences in which the commoner trisyllabic words occur, spell dissyllables, and know the elements of grammar from oral instruction: his third, till they can read easy narrative, spell ordinary trisyllables or groups of shorter words, answer on the meanings of these and on the scope of the passage, and parse easy sentences: his fourth, till they can read fluently, and follow with intelligence narrative of greater continuity and on a wider range of subjects, spell correctly easy sentences to dictation, and parse syntactically and with reference to

[1] *Min Counc.*, 1849-50, pp. 177, 615.

the outlines of analysis : his fifth, till they are competent to read descriptions of scientific subjects, spell correctly all words in ordinary use orally or to dictation, apply the rules of syntax fully, and the rules of analysis in a further degree : whilst his sixth or highest class, if he has one so far advanced, will probably be engaged with some English classic author, minutely studied with reference to matter, style, and grammatical analysis.

He will have a similar gradation of progress in his arithmetic classes. His youngest class may be occupied with the easier kind of examples in the four fundamental rules : his second with examples of greater difficulty in these rules, the easier reduction-tables and the earlier compound rules : his third may carry out the same subjects to a further extent : his fourth may be working the rule of three, and entering vulgar fractions : his fifth may continue these rules, and add the compound rule of three, interest, and practice : whilst his sixth will take up decimal fractions and remaining rules.

These divisions are given simply as approximations to the average case ; the actual stages of progress in any school must vary according to the general state of knowledge in it. But the teacher must have some such scale for himself, whatever it be, and carry it out rigidly in his classification.

Where there is a distinct classification for writing, this subject must be laid out in a corresponding manner. The other parts of instruction, such as Bible-knowledge and geography, may be taken under the classification for English already given. These subjects do not require so minute a subdivision of classes, as they appeal more to general intelligence, and less to technical attainments : so that two of the English classes may often be advantageously combined for them.

155. Test for the Single Classification.—In a school which adopts but one classification for all subjects, the test of the pupil's position is more complex ; inasmuch as each class must now be associated in the teacher's mind with a certain proportionate knowledge of subjects. It is sufficient in practice to apply a double test ; the pupil's knowledge of English, modified by his knowledge of arithmetic, will determine his place. In those exceptional cases, where there is great disparity between the two, he must be placed according to an average struck between

them. It may be noticed that, where the single classification is adopted, the number of classes is much smaller in proportion to the number of pupils, than it is with the manifold. Thus a school of 100 pupils may, according to the one, show only five or six classes; but, according to the other, twice or thrice as many, according to the number of different classifications.[1]

156. Age as an Element in Classification.—The age of the pupils is a subordinate element in classification. There is but one case in which it can be allowed to have any weight. Owing to early disadvantages a particular pupil may not have made the progress natural to his years; so that the test of attainment alone might lead us to place him in a class of which the members are much his juniors. But there are certain moral considerations to be taken account of here. On the one hand, the influence he may exercise over the class, in virtue of the great deference with which children look up to those of their comrades who have greater experience than themselves, may not be conducive to its good; on the other, he may feel his own self-respect impaired to such a degree as to weaken his motives to exertion. In such a case, therefore, the interests of the class and of the pupil himself may require a relaxation of the test of attainment, to a certain extent, in favour of that of age.

157. Influence of Classification on Progress.—A finical over-minute classification involves great loss of time in a school, by compelling the teacher to take in detail work which he could perform as effectively with concentration. The same result follows, but in a different way, from an insufficient classification. Where the classes are too few, each must be too large, in the sense of comprising within it pupils who cannot advance together; so that the instruction addressed to the whole class is apprehended only by a part of it. The number in a class should always bear some proportion to the skill of its teacher. Thus a monitor may be sufficiently employed with ten or a dozen pupils; an advanced pupil-teacher may be intrusted with twenty-five or thirty; whilst the master himself may, if need be, instruct a class of from forty to fifty with efficiency. The average number of classes which may be constructed out of a given number of pupils is liable to

[1] *Min. Counc.*, 1849, pp. 177 and 615, 1852-3, vol. ii. p. 11-63; also the Tabulated Reports generally.

modification by the state of knowledge and the amount of teaching power in particular schools. If the former be low, the classes will necessarily be more numerous than when it is high : if the latter be large, the classes will naturally be more numerous than when it is limited.

From the various considerations to be taken into account in the classification of a school, it is manifestly not so easy a matter as it may at first appear to make a perfectly just one ; and certainly the obstacles thrown in the way of progress by one which is not just, even to the extent of a single class, are not in general sufficiently appreciated.

A class which has been loosely constructed has always a drag on its progress, and can hardly be conducted with a high tone of discipline. That teacher, therefore, much facilitates his future work, who is scrupulous in making his classification at first, and who watches its action from week to week. This should be one great object of his superintendence. Pupils have ambition enough to desire promotion, and, on the whole, penetration enough to see when they may fairly look for it. And the teacher who has the tact to provide the necessary changes at the proper time, will stimulate not only the diligent to greater diligence, but even the backward to press on. When pupils are allowed to remain in a class who are clearly beyond the hope of rivalry, the motives to exertion are weakened both in these pupils themselves and in the class : the former having no further eminence to attain, the latter being shut out from the prospect of attaining eminence at all.

158. Mixed Schools and Classes.—It has been made a question whether pupils of different sexes should be classified together, or even received into the same school ; not from any doubt of their being able to go on together with the same studies, but partly from the consideration that their studies should not be entirely the same, and mainly from some suspicion that the character and manners of each may be injuriously affected. There does not appear to be any force in either of these reasons. When the school is under judicious guidance, the weak points in the character of the pupils of either sex, so far from being transferred to, are corrected by the presence of, the other. The character of the boy is refined, that of the girl strengthened ; the tendency of the one to inconsiderateness and rudeness, of the other to triviality,

is restrained : the tone of manners in both is elevated. Nature sets us the example of the mingling of the sexes for mutual influence in the family circle ; and there is no reason why the good effects that flow from its constitution should not be looked for, in greater or less measure, when we imitate her example in the common school. That they may be attained in a well-governed school, experience, it is believed, amply attests : under any other conditions, the influence of the pupils on each other is not to be trusted, whether the school is mixed or not. As for the minor difficulty, that the studies of the sexes must be to a certain extent different, a teacher of any skill can easily arrange to give the girls their industrial instruction without destroying the equilibrium of attainment in his classes. In mixed schools, the boys and the girls are generally arranged in different classes ; but there is the same propriety in mixed classes as in mixed schools, provided the pupils of different sexes form distinct parts of the class, and interchange places (where that practice is followed) among themselves alone.

159. Drafts and Sections.—We have used the word *class* in its common acceptation, as denoting that moderate-sized group of pupils which is placed under one teacher for its ordinary instruction. There are two other kinds of classes more or less employed in schools :—(1.) The smaller subdivision of pupils sometimes resorted to in subjects which require much individual exercise ; and (2.) That assemblage of two or three classes into one group to receive collective instruction. These are commonly distinguished from *classes* by being termed, respectively, *drafts* and *sections*. Drafts are confined to those subjects which are strictly matter of technical attainment, such as reading and spelling. The teacher, whose circumstances admit of it, will find his advantage in frequently using such drafts under monitors, either to prepare some lesson for his examination, or to revise some lesson which he has given. Sections are objectionable when used as the ordinary working divisions of the school ; on the ground that it is impossible to teach with efficiency the technical subjects of instruction—which constitute the principal work of the school—to large numbers simultaneously. The question here raised, therefore, is only to what extent they may be used subserviently to the work of the *classes*. Sections are applicable to subjects of

general intelligence, in which the comprehension of one topic is not measured by that of another logically preceding it, such as some aspects of religious instruction, geography, and the object-lesson; for in these alone can classes of different standings engage in a common exercise. Even as thus limited, sections cannot be said to be indispensable: if the master finds that he has sufficient teaching-power and time at his disposal to accomplish in classes all that he deems necessary in the way of oral instruction, it would be superfluous to form sections for that purpose. On the other hand, they are often advantageous: if he is not assisted by those on whom he can rely to address such instruction with effect to their classes, he will find in sections the means of himself doing so with a reasonable expenditure of time.

The sum of what has been said respecting drafts and sections is this:—that, whilst they are generally expedient to a certain extent, they must be looked on as entirely subordinate in the common-school to the classes, in which it must be held that the substantial work of the school proceeds.

160. Standards of Attainment—The Infant-School.—At whatever age the pupils leave school, it is very desirable that the teacher should form to himself a correct and distinct idea of the standard of attainment which is practicable in their circumstances. That much good teaching is less effective and complete than it might be from the want of such a standard to go by, can hardly be doubted.

On leaving a good infant-school at the age of seven years, a child should carry with him the following amount of attainment:—He should be able to read fluently 'easy narrative' on common objects, and the simpler parts of the Old and New Testament history; to write simple words correctly on the slate in fair round hand; to perform orally elementary operations with numbers up to a hundred, and the simplest kind of these operations on the slate, to write down numbers correctly up to 1000, to know the tables of weight and measure, and to work orally easy calculations with them; he should have an "appreciable amount of information on natural history and objects of general utility," with some notions of geographical distribution; he should be acquainted with the narrative parts of Scripture, and with the lessons they teach; he should be able to regulate his own

conduct by the precepts of morality and religion ;—observation should have become a habit with him, his imagination should have acquired firmness to follow description, and he should be able to describe intelligibly what he sees, both in respect to the language which he employs, and the arrangement of topics which he adopts.

This standard is given on the supposition that the pupil, on leaving the infant school, passes into the common school : otherwise it might be somewhat raised in respect of the instrumentary branches. More time would be given to these ; and, in particular, the lessons in form and in number would assume more decidedly the special aspect of lessons in writing and slate-arithmetic. On the supposition that he has still the common school before him, his technical power in these branches is kept designedly in arrear of his general intelligence in them. But the fruits of this are reaped during his eighth year, the first of his common school attendance. Being well instructed in the principles of elementary numerical operations, and having his eye and hand well trained to observe and imitate form, he makes rapid progress in arithmetic and writing as soon as he is initiated into the mechanical setting-down of the prescribed exercises. In fact, to estimate justly what is done in the infant-school, we should keep in view what is accomplished during the first year of the child's attendance at the common school.

161. **The Common School.**—" It is quite possible to teach a child soundly and thoroughly, in a way that he shall not forget it, all that it is necessary for him [the peasant boy] to possess in the shape of intellectual attainment, by the time that he is ten years old. If he has been properly looked after in the lower classes, he shall be able to spell correctly the words that he will ordinarily have to use : he shall read a common narrative—the paragraph in the newspaper that he cares to read—with sufficient ease to be a pleasure to himself and to convey information to listeners ; if gone to live at a distance from home, he shall write his mother a letter that shall be both legible and intelligible ; he knows enough of ciphering to make out, or test the correctness of, a common shop bill ; if he hears talk of foreign countries, he has some notion as to the part of the habitable globe in which they lie [besides knowing his own country well] ; and, underlying all, he has acquaintance enough with the Holy Scriptures to follow the

allusions and the arguments of a plain Saxon sermon, and a sufficient recollection of the truths taught him in his catechism, to know what are the duties required of him toward his Maker and his fellow-man."[1] To this should be added such an amount of general knowledge, including the leading facts of English history, as may be supposed to be embodied in the reading-books used in his school.

By attending a common-school till they are eleven years of age, children may "learn thoroughly well all the absolute essentials of education;" that is, they shall reach so much intelligence and knowledge as shall dispose and enable them to carry on their own self-education in after-life. They should be able to read from any ordinary periodical with profit and pleasure to themselves and others—technical phraseology excepted: to write in a fair regular hand to dictation from the same book, with general correctness: to give in writing a connected and intelligent account of any incident they have read about or witnessed, and to write a familiar letter with fair correctness of expression; they should know the structure of a sentence fairly well, and parse syntactically all constructions of common occurrence; they should work correctly and fluently the simple and compound rules in arithmetic, the rule of three, practice, simple interest, and fractions, vulgar and decimal, and duodecimals, in their ordinary applications, but not exhaustively; they should know the British Empire well, and the earth's surface generally; and they should have acquired orally and from their reading-books a fair amount of general knowledge, including the outlines of the history of their own country. In religious knowledge they should be familiar with the Scripture narrative throughout, its leading didactic portions, and with the catechism. They may, moreover, be capable of drawing the outlines of simple objects correctly from copy, and of singing simple tunes readily from note.

Whilst the above lists are given as representing the possible attainments of common-school, it must be distinctly understood that they are practicable only under the following favourable conditions:—That the child has attended the infant-school regularly till seven; that he has attended the same common-school regularly throughout his course; and that its management has been good, implying thereby that the teaching has been intelligent through

[1] Report of Education Commission, pp. 31, 243-4; *Min. Counc.*, 1854-5, pp. 393-4.

all the classes, and that the time has been well employed. Where one or other of these conditions is wanting—and this is the case, probably, with at least one pupil out of two—deductions must be made, greater or less, from the several standards which have been described.

IV.—TIME-TABLES.

The object of the Time-table, Diary, or Routine of the School —for it is called by all these names—is to exhibit the daily work of all the classes in order of time. The principles of its construction may be more clearly apprehended, if we suppose ourselves, in the first instance, to be dealing with a single class.

161. Connected View of Class-Work.—In making a time-table, the teacher must have before him all the subjects which are to occupy the attention of the class: these are the materials which he has to arrange. All the classes may be conveniently reckoned under three stages, junior, middle, and senior; with each of which a certain outline of study is associated. Thus a junior class, aged from seven to nine years, will be engaged with reading, spelling chiefly oral, arithmetic, writing (conjoined with drawing in some cases), singing, and oral instruction applied to grammar and geography; to which add religious instruction, and, for the girls, sewing. A middle class, aged from nine to eleven, will be engaged with reading, spelling oral and written, arithmetic, writing (with drawing as before), grammar, geography, singing, and oral instruction (to a smaller extent); to which add religion, and, for the girls, sewing. A senior class, aged over eleven, will be engaged with reading and recitation, spelling chiefly to dictation, arithmetic, writing and drawing, grammar, geography, history, composition, and singing; to which add religion and sewing, as before. In making a time-table for a class, the first step is to refer the class to one or other of these three stages.

The next step is to assign to the various subjects that amount of the total school-time which their relative importance demands. The first place, after religious instruction, is due to the technical subjects of reading and spelling, writing, and arithmetic (§ 66, 67). The error of past times has been to confine attention to

these exclusively: other branches may be taught in school, not only without retarding these, but even so as to facilitate progress in them. We err in the opposite extreme, and more inexcusably, if we undervalue these others, or, which is the same thing, treat branches of less importance at such length as to raise them to the same level. Thus it is sometimes reported of schools that geography or history is taught very elaborately, or that much skill is attained in singing or in drawing. It should be understood that such results are good, only provided they accompany equally satisfactory results in subjects which are more essential. If this is not the case, there is reason to suppose that the teacher is following his own tastes in his instruction, rather than the substantial interests of his pupils; and the report which seems to convey eulogy is, to the discerning eye, rather suggestive of censure. The technical subjects which have been named should, in their various forms, occupy not less than three-fifths of the entire daily school-time.

162. Length of School Attendance.—The studies of a class must be powerfully influenced by the circumstances of the school; particularly by the length of school-attendance. A pupil who has to leave school at ten years of age cannot go through the same course as one who remains till he is thirteen or fourteen. If he be set to make the attempt, he will begin many things, but will never get beyond their beginnings. He will therefore leave school with an undisciplined mind, since it is not in learning the elements of a subject that mental discipline lies, but in advancing with their application; and the knowledge he carries with him will be useless, because imperfectly apprehended, and wanting both the power and the desire of self-extension. Next to religious instruction, his attention should be mainly confined to reading with intelligence, writing, and arithmetic of a practical sort: his reading-book should present him with as much history and physical geography as he needs to know; an elementary text-book will suffice to give him a knowledge of the geography of his own country; occasional oral instruction should give him some knowledge of a more general character; a moderate acquaintance with grammar will suffice, and it should be conveyed for the most part orally; singing will not retard his progress in study, whilst it will open up to him at least one source of rational enjoyment.

163. Industrial Character of the District.—Only within

very narrow limits is the time-table *directly* influenced by the industrial character of the district. If the demand for juvenile labour is not such as to draw the children away from school at an early age, the studies of one school will not differ materially from those of another. The design of the common-school is to give a general education, which may fit its pupils for any occupation : its essential subjects are therefore unaffected by any such accidental consideration as that before us. Subsidiary branches may be modified in the following way :—(1.) In a commercial town, it may be expedient to devote attention to some special applications of arithmetic ; to give prominence to certain parts of geography ; and to give information in the nature and uses of the principal articles of its commerce. (2.) In manufacturing districts information should be given about the articles produced in the district, the industrial process exemplified, and also on social economy. (3.) In agricultural districts, opportunity may be taken to explain to the pupils the objects of good cultivation, and the processes in which that consists. And (4.) in mining districts, the instruction should advert to the nature and uses of the metals or minerals of the district, the processes of its production, and the laws which regulate health and safety in the miner's life. On the whole, the industrial character of the district is sufficiently consulted by giving a certain complexion to the *oral instruction*.

164. Short-Time Schools.—But the industrial character of a district exercises an enormous *indirect* influence on the engagements of the school. It is this consideration which determines the duration of school-attendance ; and therefore, as just seen, the general complexion of school-work. Shortened school-attendance appears under three aspects. The most common exists in schools from which the pupils are simply withdrawn at an early age, as eight or nine. Another is found in what are termed half-time schools ; *i.e.*, schools attended by pupils who have been taken at a very early age to manual labour, and who are allowed, in virtue of an arrangement with their employers, to attend school during part of the day for a given period. A third is exhibited in those schools which are attended regularly during one season only, summer or winter as the case may be, the pupils being required at home or for work during the other. Short-time schools are not in themselves more difficult to conduct than ordi-

nary schools ; less progress will of course be made in them, but the teacher can easily accommodate himself to his circumstances. It is the case of schools which are only partially of this character that causes him so much perplexity. And in truth no time-table which he can ever construct for them will lead to satisfactory results. Such schools are radically bad in constitution ; nothing can prevent their incongruous elements, the short-time pupils and the full-time ones, from interfering with each other's progress. At the most he can only adopt certain expedients to diminish the evil :—thus, where the proportion of short-time pupils is small, the time-table should be made as for an ordinary school, but they should be excluded from certain lessons to work special exercises of their own ; where the number of such pupils is the majority, it should be made for them, and the other pupils should receive supplementary instruction by themselves ; where many attend only half-time, the best course is to make the time-table for the forenoon and that for the afternoon independent of each other ; where there is a winter attendance, as distinct from a summer one, two time-tables should be made in course of the year, and the classification specially revised at the beginning of each season. It may be added here that, in all districts where there are short-time schools, the infant school should be diligently used.[1]

165. The Nature of the Home-Work.—Another consideration to be allowed for in the time-table is the amount of home-work to be expected from the pupils ; by which is meant, not the number of exercises which they can perform at home in connexion with the school-instruction, but the amount of preparation which they bestow on the daily lessons. If this is very small, or none at all, time must be set apart for it in the school ; for they must be accustomed to the independent self-sustaining effort involved in learning, as well as to the exercise of intelligence involved in following the teacher's expositions. The home-work depends on the circumstances and intelligence of the parents. If they are themselves educated, and alive to the value of education, they will not only support the teacher in prescribing such work, but will ascertain that it is performed for him : if on the other hand they are themselves ignorant, they will not be able to perceive why they should take the trouble of enforcing such work on the

[1] *Min. Counc.*, 1851-2, p. 908 ; 1855-6, p. 558

part of their children, whom they send to school, as they suppose, for all needful instruction.

166. Length and Order of Lessons.—The length of time that should be occupied in the several class-lessons depends on two considerations; the age of the class and the nature of the subject. In younger classes they may extend over from twenty minutes to half-an-hour; in advanced classes, from half-an-hour to three-quarters. Lessons which require a patient exercise of thought, such as the investigation of a passage, necessarily take a longer time to work out than those which are only an examination on something which has been committed to memory. Intervals for recreation should be provided for as carefully as the periods for study. Where a stated interval is recognised in the district, the teacher must of course adopt it; where there is none, he must make, and scrupulously observe, provision in this respect both for the class and for himself. Younger classes require more recreation than those which are advanced.

The subjects should be taken, so far as possible, in such an order as to relieve each other; in other words, those which involve the same kind of mental exercise should not be taken in succession. Were the school engagements all of the same kind, frequent breaks would be necessary: as it is, change of engagement has, to a certain extent, the same effect on the pupil's mind as rest. Lessons like the Bible-lesson and that on the scope of a passage, or like the geography-lesson and the object-lesson, or like writing and working on the slate, should be interrupted by some lesson which exercises a different talent.

It is not necessary that every kind of lesson should be taken daily.

167. Examples of Single-Class Time-Tables.—Annexed are examples of time-tables for a single class in various circumstances —the intervals being omitted.

1. FOR A JUNIOR CLASS.

First Hour.	*Second Hour.*	*Third Hour.*	*Fourth Hour.*	*Fifth Hour.*
Opening School, 10	Writing, ... 40	English (reading, spelling, examination, parsing)45	Arithmetic, ... 45	Prac. of reading, 30
Bible-lesson,.... 30	Oral grammar,.. 20		Singing,..... 15	Geography (3) Oral-lesson (2), 20
Mental Arith.,.. 20	Drawing provided here if required.	Singing, ...15		Close,..... 10

2. FOR MIDDLE CLASS.

First Hour.	*Second Hour.*	*Third Hour.*	*Fourth Hour.*	*Fifth Hour.*
Opening, ... 10	Writing (Drawing), ... 40	English-lesson (as above), ... 45	Arithmetic, ... 45	Prac. of reading, 20
Bible-lesson, ... 30	Mental arith. or dictation, ... 20	Singing, ... 15	Singing, ... 15	Geography (4), Oral-lesson (1), 30
Grammar, ... 20				Close, ... 10

3. FOR SENIOR CLASS.

First Hour.	*Second Hour.*	*Third Hour.*	*Fourth Hour.*	*Fifth Hour.*
Opening, ... 10	Arithmetic and mensuration, .. 40	English (including history), ... 45	Writing and book-keeping, ... 40	Singing, ... 20
Bible-lesson, .. 30	Dictation or recitation, ... 20	Singing, ... 15	Prac. of reading and recitation, 20	Geography (4), Oral-lesson (1), 30
Analysis, ... 20	Drawing.			Close, ... 10

4. GIRLS' CLASS.

First Hour.	*Second Hour.*	*Third Hour.*	*Fourth Hour.*	*Fifth Hour.*
Opening, ... 10	Arithmetic, ... 40	Sewing.	English, ... 45	Writing 30
Bible-lesson, ... 30	Prac. of reading, 15		Singing, ... 15	Geography (3), Dictation, ... 20
Grammar (4), Object-lesson (1), 20	Singing, ... 5			Close, ... 10

168. Time-Table for a School.—It is comparatively easy to make a time-table for a single class which has a teacher for itself exclusively; or for a number of classes, so long as we suppose each to have its own special teacher. It is the inequality between the number of classes and that of teachers which gives rise to the difficulty of arranging the occupations of the common-school; and the greater this inequality, the greater the difficulty. Suppose that the first three classes just referred to constitute a school amongst them: if there be three teachers, the time-table there set down for each might be quite practicable; if there be only two, one or other, perhaps all the three, must be modified; and much more must this be so, if there be but one teacher.

In drawing up a school time-table, the teacher, after determining the work of the classes, has to consider the various ways in which they may be engaged, otherwise than by each receiving,

within the ordinary school-hours, direct instruction exclusively addressed to itself. These are the following :—(1.) Two classes may be combined into one for some lesson ; (2.) a class may be placed under charge of a monitor for some kinds of instruction ; (3.) it may be engaged at the desks in performing some silent exercise to be afterwards inspected ; (4.) a lesson may be prescribed to be learnt for some subsequent part of the day, under the eye of the master or pupil-teacher, and to be afterwards carefully heard with the view of testing its preparation ; and (5.) a class may be brought for a special lesson before the regular hour of meeting, or detained after the hour of dismissal. The art of making a time-table consists in combining these expedients in such a way as to provide suitable engagement for each class, and adequate superintendence for the whole. The process, which is very much one of trial and error, will be facilitated if provision be first made for the essential subjects throughout the several classes ; the secondary subjects can then be distributed according to the time which remains unoccupied. The only consideration which limits the teacher in the choice of expedients is the classification adopted in the school : if it be the 'single,' then, as he is free to combine all subjects at the same time, is he also free to adopt any of the expedients ; if it be the 'manifold,' then, as he is confined to certain subjects at one time, is he also necessarily confined to those of the expedients which are applicable to the subjects.

169. Provision for Superintendence of School.—The teacher should arrange his time-table so as to provide for his coming into contact with all his classes at stated intervals. To what extent need not be prescribed, as it must vary with circumstances ; but it should be long enough to enable him thoroughly to influence the instruction of the class with his own intelligence, and its discipline with his own authority. It is bad policy in every way to confine himself almost exclusively to a special class. The school suffers in all its interests ; not to speak of the injury done to the pupil-teachers when they are left thus prematurely to themselves, the other classes will not progress in their studies equally with his own, and his ignorance of his pupils will prevent him from administering discipline, either by reward or punishment, with any sure adaptation to individual character. He should consider himself as equally interested in all the classes of his school. Perhaps

a fair daily proportion of time to give to this active superintendence is one-fourth, either consecutively or in portions ; but, that he may see all the aspects of the school, it should not be the same hour each day. His own class may for the time be committed to an advanced pupil-teacher, or employed in working some exercise by themselves.

170. Provision for Routine Business.—Whilst the time-table exhibits the engagements of classes and teachers, so far as instruction is concerned, there is a part of the master's business which it cannot, or only imperfectly, notice. Besides providing for his own teaching and superintendence, he has to find time for administering the general discipline and the routine business of school. If he does not, he is liable to be constantly interrupted in various ways ; *e.g.*, by complaints from the other classes, by requests for leave of absence, and by questions relating to tasks or exercises that may have been prescribed. To avoid distraction, he must assign a special time for each of these. Thus he may have one time for giving leave of absence, or he may be able, perhaps, so to arrange his intervals of recreation as to dispense with the necessity of giving leave at all ; he may offer such explanations of an exercise before sending a class to the desks as to shut out any occasion for further questioning on their part ; and he may have stated times for receiving complaints, reviewing conduct, and administering discipline. If such arrangements cannot be written down in the time-table, they should none the less be made, and be quite familiar to the whole school.[1]

171. General Directions regarding Time-Tables.—In the matter of time-tables the following cautions will often save from important errors and inconveniences :—(1.) The teacher should not be too hasty in carrying out his own scheme on entering upon a new situation. That of his predecessor may be supposed to have been framed on a consideration of the peculiar circumstances of the district ; which will in all cases modify the application of general principles. A period should therefore be passed in observation, whenever this is practicable, to prepare him to carry out his own views with less risk of error.—(2.) If he acts in this way, he will be better able to dispense with frequent changes in his time-table. These unsettle the pupils' habits of work, and thus inter-

[1] Abbot's *Teacher*, chap. ii.

fere with the tendency to regularity and diligence which the imperative performance of stated work at stated times cannot but foster in them. Doubtless, as his experience increases, he may find room for improving his plans; but he should allow improvements to accumulate, till the benefit which may be expected from their introduction shall manifestly more than compensate for the inconvenience caused by altering the time-table.—(3.) The time-table, once introduced, should be scrupulously followed. If the teacher take liberties with it by prolonging one lesson into the time of another, he will certainly lose time upon the whole, whilst he destroys the good effect resulting from regularity of work. He should show his pupils that he is bound by the law of order and punctuality as much as they are.—(4.) The changes of position amongst the classes, which are generally required with the change of lessons, should be the least possible, and performed in the least possible time. Neglect of this naturally leads to want of punctuality in observing the periods prescribed for the several lessons; whether or not, the time of the school is so valuable that every minute should be carefully husbanded.—(5.) Finally, the time-table should be made out explicitly, and suspended in a prominent place in the school; for it is designed to guide not only the work of the teacher and the classes, but the inspection of all who are interested in the school. Out of it each pupil-teacher should extract what concerns his own class, copy this into his daily register, and make it familiar to the class; so that all may know that they are following a fixed order of work.

172. **Examples of Time-Tables.**—Annexed are some examples of time-tables applicable to schools in various circumstances; an analysis of which, with reference to the principles already laid down, may enable the teacher to construct one for himself in any circumstances whatever.

In the following Time-Tables, the school is understood to be opened in every case with praise and prayer; which should not occupy above ten minutes. The 'English' of the Senior Class is to be understood as including History; the 'Reading-Book,' and the 'Text-Book of History' affording the subject for the English Lesson alternately. When Latin or Geometry is taught, a sixth hour must be added in whole or in part, to the Time-Table.

(1.) *School of 50 Pupils; Teacher unaided.*

Class.	*First Hour.*	*Second Hour.*	*Third Hour.*	INTERVAL, 1 hour.	*Fourth Hour.*	*Fifth Hour.*
1.	Rel. Less., 40 / Learning Eng. Lesson, 20	English, 40 / Slate Exer., 20	Arith., 45		Writing, 40 / Arith., 40 — Dictation & Reading Practice, 20	Geography & Analysis, 20
2.		Slate Ex. 20	English, 45		English, 30 / Arithmetical Board, 30.	Grammar & Geography alternately, 20
3.	WorkingArith. 40 / Religion, 20	Writing, 0	Reading & Spelling (Mours.), 45			
4.		Reading with Monitors, 40	Reading with Teacher, 20 / Slate Exer., 40		Reading and Number with Monitors.	Number with Teacher, 20 — Learning a task, 20 — Singing, 20
5.		Coll. Bible Less., 20	Play-ground, 15			

N.B.—In such a school, Monitors are, for certain lessons, indispensable.

(2.) *School of 70 Pupils; Master and Pupil-Teacher.*

Class.	9 to 10.	10 to 11.	11 to 12.	Singing, 11.45-12	INTERVAL.	1 to 2.	2 to 3.
1.	Bible-Lesson, 9-9·40 / Reading Practice.	Prepare English Lesson, 10-10·20 / English Lesson.	11-11·45 Arithmetic.			Writing and Dictation.	Mental Arithmetic, 2·15-2·30. — Grammar and Geography.
2.		Writing and Dictation.	English.			Arithmetic.	
3.	Bible-Lesson, 9-9·40 / Reading Practice.	Do.	Arithmetic.			Prepare English Lesson, 1-1·15 / English Lesson.	Singing, 2-2.15
4.		Do.	Do.			Do.	Do. (Collectively or separately, with aid of a monitor).
5.		Bible-Lesson, 10-10·20 / Slates.	Reading, 11-11·30 — Number, 11·30-11·45			Object Lesson and Number Lesson alternately, 1-1·15 / Slates.	Reading.
6.							

(3.) *Girls' School of* 60 *Pupils; Mistress and Pupil-Teacher.*

	No.	10 to 10·45.	10·45 to 11·15.	11·15 to 11·45.	11·45 to 1.		Interval.	2 to 3.	3 to 3.30.	3.30 to 4.	
Upper Divisions.	1.	Bible, etc.	Dictation.	Writing.	11·45-12·45. English Lesson.	12·45-1. Mental Arithmetic.		Sewing.	Arithmetic.	Geography.	*N.B.*—The children in this school (and the following) are supposed not to be over 7 years of age in the lower division, and in the upper not to exceed 11.
	2.	Bible, etc.	Writing.	Reading Lesson.	11.45-12.15. Grammar.	12.15-1. Arithmetic.			Arithmetic.	Dictation and Geography alternately.	
	3.			Reading Lesson.	Slate-Writing.	Arithmetic.			Arithmetic.		
Lower Divis.	4.	Slate-Writing.	Reading Lesson.	Spelling on Slate.	Dismissed.			Reading in Sections.	Collective Bible, etc., and Arithmetic alternately.	Slate-Writing and Exercises.	
	5.	Slate-Exercises.	Reading Lesson.								
	6.		Reading Lesson.								

(4.) *Girls' School*—80 *to* 100 *Pupils; Mistress and* 2 *Pupil-Teachers.*

No.	9 to 10.	10 to 11.		11 to 12.		Interval.	1 to 2.	2 to 3.	
1.	Bible Lesson, 9-9·40 — Geography.	Arithmetic, 10-10·40. Dictation and Grammar alternately.		11-11·15. Singing.	English Lesson, Grammar.		Writing, 1-1·30.	1.30-2.45. Sewing (with Reading-Practice).	Singing.
2.		Do.			Do.				
3.	Do.	Do.			Do.				
4.		Writing, Slates or Copy.	Reading (in Drafts).		Dismiss.		Reading, 1-1·40, Oral Lesson.	Arithmetic.	
5.	Bible Lesson, 9-9·40 — Number.							Slates.	
6.									
7.									

(5.) *Mixed School—120 Pupils; Master, Mistress, and 2 Pupil Teachers.*

	No.	9 to 10.		10 to 11.	11 to 12.	1 to 2.	2 to 3.	
Upper Division.	1.	9-9·40.	Bible Lesson.	10-11·45. English (including History)	11-11·45. *Boys.* Reading Practice in Classes, occasional Oral Lessons. *Girls.* Sewing, combined with Reading Practice.	Arithmetic.	2-2·30. Writing.	2·45.
	2.	9·40-10.	Geogy. (together).			English with Grammar.	Writing.	Ment. Arith. or Dictation.
	3.	Bible Lesson.	Geography.	Arithmetic. Do.	Singing.	English with Grammar.	Writing.	Singing.
	4.	Bible Lesson		Do.		Writing. Mental Arith.	English.	Recit.
Lower Division.	5.	Bible Lesson.	Reading Practice in draffa.	10-10·40. Arithmetic.	Singing and Exercises. Interval.	1-1·30. Oral Lesson	1·30-2. Slate-Writing.	2-2·15. Singing.
	6.							2·15-2·45 Reading Lesson.
	7.			Number.				Reading Lesson.
	8.							

Interval.

This School is supposed to have two apartments, corresponding to its two divisions.

(6.) *Mixed School*—150 *Pupils ; Master and 3 Pupil-Teachers.*

(In this case the distribution of Work amongst the Master and Pupil-Teachers is also specified.)

	No.	10 to 11.	11 to 12.		12 to 1.	1 to 2.	2 to 3.	3 to 4.	4 to 4·15.
Upper Division.	1.	Music and Exercises, 5 or 10 minutes.	11-11·30.	(M.) Arith. at Board.	12-12·30.	Playground, 5 minutes ; Exercises when cold.	(M.) Grammar or Geography.	(M.) Reading.	
	2.			Arith. in Seats.			(P.-T.) Grammar or Geography.	(P.-T.) Reading.	*Reading to the Children.*
	3.		11·30-12.	Arith. at Board.	12·30-1.		Arith. in Seats.	(P.-T.) Reading.	"Good Conduct" Tickets Given ; Dismissal.
	4.			(P.-T.) Writ.				(P.-T.) Reading.	
Lower Division.	5.	(M.)* Bible, Catechism, and Sacred Geog.	11-11·30.	(P.-T.) Arith.	12-12·30.	(M.) Dict. Spell., etc.	(M.) Writ.		
	6.	(P.-T.) Bible, Catechism, and Sacred Geog.	11·30-12.	(P.-T.) Writ.	12·30-1.	(P.-T.) Dict. Spell., etc.	(P.-T.) Gram. or Geog.		
	7.	Slates in Gallery.	11-11·30.	(P.-T.) Read.	12-12·30.	Slates in Gallery.	Arith. in Seats.		
	8.	(P.-T.) Read. etc.	11·30-12.	(P.-T.) Collect. Gall. Less.†	12·30-1.	(P.-T.) Gram. or Geog.			
	9.	Slates in Gallery.	11-12.	In Gallery Reading Lessons.	12-1.	Read. heard by two P.-T's. Slates when not Read.	Slates in Gall.; Copy from Board.		
		Reading heard by a P.-T.—Slates in Gallery when not Reading.					Tomorrow's Lessons given out and read over by two P.-T's. Slates when not Reading.		

* (M.) Master, (P.-T.) Pupil-Teacher.

† Master and P.-T's. take Gallery Lesson in rotation, each having his own subject. Master visits daily the Classes under P.-T's.

(7.) *Time-Table for Half-time or Factory School, consisting of* 8 *classes.*

HIGHER SCHOOL, CONTAINING THE FOUR HIGHEST CLASSES.

9 to 9·30.	9·30 to 10·15.	10·15 to 11.		11·15 to 11·45.	11·45 to 12·30.
Bible Instruction.	1st & 2d Classes. Writing 4 times, Dictation on Slates once a week. 3d & 4th Classes. Reading, etc.	1st & 2d Classes. Reading, etc. 3d & 4th Classes. Writing, as above.	INTERVAL.	All the Classes. Grammar and Geography alternately.	All the Classes. Arithmetic, etc.

LOWER SCHOOL, CONTAINING THE FOUR LOWEST CLASSES.

Bible Instruction.	5th & 6th Classes. Reading, etc. 7th Class. Writing. 8th Class. Slate-Writing.	5th & 6th Classes. Writing. 7th & 8th Classes. Reading, etc.	INTERVAL.	All the Classes. Geography. 8th Class dismissed at 11·45.	The remaining Classes. Arithmetic.

This Time-Table is taken, with a slight modification in the period assigned to Bible-Instruction, from Minutes 1855-56, p. 565. It would be improved by having some provision for singing.

V.—SCHOOL-REGISTRATION.

Registers should be kept in every school to mark the admission, progress, and withdrawal of pupils; the character of their attendance; their position in the classes as indicative of merit; the school work; and the amount of fees or school-pence. For these topics three registers will suffice.

173. **Register of Admission, Progress, and Withdrawal.**—This Register may most conveniently consist of two parts; the Register itself strictly so called, and the Alphabetic Index. Thus—

REGISTER.*

Index No.	Date of Admission.		Pupil's Name.	Age.	Previous Education.	Name and Residence of Parent or Guardian.	Occupation.	Date of Admission to successive Classes.							Date of Leaving.	Reason.	Character.
								8	7	6	5	4	3	2	1			
1.																		
2.																		
3.																		
4. &c.																		

ALPHABETIC INDEX.

Name.	Index No.	Name.	Index No.	Name.	Index No.	A—C.

* This and the following Specimens are taken, by permission, from "School Registers" published in Constable's *Educational Series*.

The various items in the 'Register' fall under three heads. (1.) The first seven relate to enrolment, and should be filled in at the date of the pupil's admission. (2.) The eighth column, subdivided according to the number of classes, relates to progress. One classification is here supposed: but even where more are employed, it is sufficient to record the pupil's progress through the 'English' classes, as evidence of his capacity and diligence. (3.) The remaining columns relate to withdrawal, and are filled up when the pupil leaves school. In the last column the teacher should insert such epithets as most accurately represent his mental and moral character.

The alphabetic index prefixed to the register is designed to facilitate reference to the register itself. It consists of two columns, one for names arranged according to their initial letters, and the other for the index numbers; and it should contain about the same number of names as the register. The name and number of every pupil who is enrolled in the register should be immediately transferred to their appropriate place in the alphabetic index. The manner of using it is almost self-evident: thus, if the teacher wishes to find the details of enrolment or character of any of his former or present pupils, say John Smith, he turns to the alphabetic index, column S, for the name; beside which he will find the number of that name in the Register.

174. Daily Register of Attendance.—This register, though chiefly occupied with 'Attendance,' may conveniently record in addition 'Merit,' 'School-Work,' and 'Fees or School Pence.' In larger schools, each class will require a separate register for itself; in smaller schools, two or more classes may be combined into one group for registration, or even the whole school may be treated as one class. But in any case the sexes must be registered separately. The items to be recorded in the daily register will appear from the accompanying specimen:—

_____ *Class.* _____ 18____ *to* _____ 18____.

No.	NAMES.	Index No.	M	T	W	T	F	S	M	T	W	T	F	S	M	T	W	T	F	S	M	T	W	T	F	S	Whole Days Present.	Marks week ending				Total.	Fees.
1																																	
2																																	
3																																	
4																																	
5																																	
&c.																																	
1. No. Present daily,																																	
2. Average daily Present for Week,																																	
3. No. Present at all for Week,																																	
4. No. on Register for Week,																																	
5. Average No. of Days attended by each Present at all for Week,																																	

£ s d.

TOTAL FEES...

To speak in the first instance of that part of the register which relates to attendance,—the left-hand column merely indicates the number in the class or in the group: the next two columns, those for 'Name' and 'Index Number,' are filled up from the Register already described: then there is provision for four weeks' marking, the space for each being subdivided into daily columns, which are distinguished by both the monthly and weekly dates. The register should be marked at some convenient time during morning-school, the presence, absence, or lateness of each pupil being indicated by such marks as the teacher has chosen for himself: in schools under inspection it will be necessary to mark also the afternoon or evening attendances. The result for the day is recorded under the head of the 'No. Present Daily,' which is the sum of the 'present' marks for the day, if the register is called once daily, and half the sum of the same marks for morning and afternoon, if it is called twice. At the end of each week the weekly results are to be inserted, of which there are four. The first of these is the 'Average Daily Present for Week,' *i.e.*, the attendance for each day after we have distributed the inequalities for a week equally over the days of the week; the average of a series of numbers being found by dividing the sum of these numbers by the number of them. The 'Average Daily Present for Week' is the sum of the Nos. present during the several school-days of the week divided by the number of such school-days. If the register is marked twice daily, and the attendance for each half day recorded, it is the sum of the attendances for the several half days divided by the number of half school-days in the week.

175. **Average Days' Instruction.**—To exhibit the state of the class-attendance more accurately, there are recorded the 'No. Present at all for the Week,' and the 'No. on the Register for Week.' The latter is got by counting the names in the class; the former, by adding together those names which have even one 'present' mark for the week. These results are useful in themselves; but they are still more useful as the means for attaining the result now to be explained, the 'Average No. of Days attended by each Child Present at all for the Week.'

Suppose that in a class of thirty there are three pupils absent each day of the week: these may be the same three each day, or

a different three, or partly both. If no other weekly result be recorded than the 'Average Daily Present for Week,' the class would appear to be in the same position as regards regularity in all the three cases; whilst in reality it is not so. In the first case, the absence results presumably from sickness, or some other valid cause, which makes the absent pupils virtually not members of the class for the week at all; and the attendance is steady. In the others, the absences indicate irregularity, resulting from causes which may be presumed to be, to a certain extent at least, avoidable. The weekly mark in question distinguishes these two states, and in the following way:—If there be five school-days in the week, the teacher's object is to give five days' instruction to all the members of his class. In neither of the contrasted states of attendance is this attained literally: but it is virtually so in the former; all who are present at all receive the five days' instruction. Where a different three are absent each day, those who are present at all (the whole class) receive, not five days' instruction, but that amount less in the ratio of twenty-seven to thirty: *i.e.*, $4\frac{1}{2}$ days' instruction. These results show how different the two states of attendance are.—Suppose again that of the three absent daily, two are the same throughout the week, and the third is a different pupil each day, the average amount of instruction received by those present at all is five days less in the ratio of twenty-seven to twenty-eight, *i.e.*, $4\frac{2}{28}$, showing a state of attendance intermediate between the other two; which from the data it evidently is.—If the supposition be that one is absent all week, and, in addition, a different two absent each day, this state of attendance would be inferior to the former, and the amount of instruction received in the average by those present at all during the week would be $5 \times \frac{27}{29}$ or $4\frac{19}{29}$.—Suppose, finally, that in this last case, where one is absent during the whole week, the number of other absentees (different pupils each day) varies from day to day, but so as to amount to two on an average, the average attendance is 27 as before, the number present at all 29 as before: and the result as to the amount of instruction is also the same, $5 \times \frac{27}{29}$ or $4\frac{19}{29}$. The 'Average No. of Days attended by each Child Present at all for the Week' is therefore the No. of school-days in the week multi-

plied by the 'Average Daily Present for Week,' and divided by 'No. Present at all for the Week.'[1]

The remaining column, 'No. of Whole Days attended by each Pupil,' is filled up by counting the days during which he has been present in course of the four weeks, considering two half days as a whole. The information which this column gives is important in relation to the pupil's progress, and also to claims for Capitation Grant (§ 185).

176. Quarterly Class-Summary.—A Quarterly Summary is made of these weekly results in some such form as on p. 197.

Speaking of that part of the summary alone which concerns attendance, the column headed 'Whole Days Present' is filled up by adding the three monthly columns which bear the same heading; and just below it is recorded the total number of school-days in quarter as the standard by which to estimate the relative amount of attendance in the case of each pupil.—The four weekly entries in the Daily register are transferred from week to week with their respective dates into this summary. The 'Average Daily Present for Quarter' (No. 4) is got by adding the averages for the twelve weeks (there being reckoned twelve school weeks to one quarter), and dividing by twelve. The 'No. Present at all for Quarter' is not an average result, but is got by taking the number present at all during the first week of the quarter and adding the number of names enrolled in the class during the remaining weeks; care being taken not to count any names twice. The 'No. on Register' is likewise not an average result, but simply the sum of the names on the register at the end of the quarter. The 'No. of Days attended by each Present at all for Quarter' is got by applying the rule already given for this result in the case of weekly periods: it is the 'No. of School-Days in Quarter' multiplied by the 'Average Daily Present for Quarter,' and divided by the 'No. Present at all for Quarter.'[2]

[1] Or, as it may be more concisely stated, the 'Sum of the Daily Attendances for Week,' divided by the 'No. Present at all.'

[2] The same result might be got by dividing the sum of the whole days attended by each pupil during the quarter by the No. present at all during the quarter. The first of these items is just the sum of the daily attendances (*i.e.*, 'No. of School-Days' multiplied by the 'Average Daily Present'): as is evident when we compare the two for one day. The two processes of getting the result in question may be used to check each other.

Summary for Quarter ending _____

No.	Names in Order of Merit.	Whole Days Present.	No. of Marks	Age.	Period since Admission.	Results for Week ending	Average Daily Present.	No. Present at all.	No. on Register	Average Days attended by each Present at all.	Work of Class for Quarter.
1											Rel. Know.,
2											Reading,
3											Spelling,
4											Writing,
5											Arithmetic,
6											Grammar,
7											Geography,
8											History,
9											Singing,
10											
&c.											

1. Total School Days,
2. Maximum No. of Marks,
3. Average Age of Class,
4. Average Daily Present for Quarter,
5. No. Present at all for Quarter,
6. No. on Register,
7. Average No. of Days attended by each Present at all for Quarter,

For Quar.

FEES.

	£	s.	d.
1st Month,			
2d Month,			
3d Month,			
TOTAL,			

Sig. _____

Date _____

177. Yearly Summary.—From the four Quarterly Summaries a Yearly Summary is made in such a form as the following :—

Summary for Year ending _____

No.	Names in order of Merit.	Whole Days Present.	No. of Marks	Age.	Period since Admission.	Results for Quarter.	Average Daily Present.	No. Present at all.	No. on Register.	Average No. of Days attended by each Present at all.	Fees. £	s.	d.
1						1							
2						2							
3						3							
4						4							
5						For Year.							
6						1. Aver. Daily Present,							
7						2. No. Present at all,							
8						3. No. on Register,							
9						4. Average No. of Days attended by each Present at all,							
10						5. Total Fees,							
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
&c.													
	1. Total School Days,												
	2. Maximum No. of Marks,												
	3. Average Age of Class,												
	4. Average Period since Admission,												

Signature _____

Date _____

Signature of principal Teacher _____

'Average Daily Present for Year' is got by dividing the sum of the four quarterly averages by 4: the 'No. Present at all for Year' by adding to the same result for the first quarter any names that have been enrolled in the class during the other three quarters: the 'No. on Register,' by adding the number of names in the class at the end of the year: and the 'Average No. of Days attended by each Present at all during the Year' by multiplying the 'Number of School-Days in the Year' by the 'Average Daily Present for Year,' and dividing by the 'No. Present at all for Year.' The rule for obtaining this last result is thus seen to be independent of the particular period for which the result is sought :—

GENERAL FORMULA.

$$\text{Av. Days att. by ea. pres. at all for} \begin{Bmatrix}\text{Week,}\\ \text{Quarter,}\\ \text{Year,}\end{Bmatrix} = \text{No. of Sch. Days in} \begin{Bmatrix}\text{Week,}\\ \text{Quarter,}\\ \text{Year,}\end{Bmatrix} \times \frac{\text{Av. daily pres. for} \begin{Bmatrix}\text{Week.}\\ \text{Quarter.}\\ \text{Year.}\end{Bmatrix}}{\text{No. pres. at all for} \begin{Bmatrix}\text{Week.}\\ \text{Quarter.}\\ \text{Year.}\end{Bmatrix}}$$

178. Summary Register of Whole School.—The results in the several class-registers are transferred to the 'Summary' register, and the state of attendance of the whole school calculated from them. The weekly summary may be of this form :—

18_____.

CLASS.	Week ending						Week ending					
	Average daily present.	Number present at all.	Number on Register.	Av. No. Days attended by each present at all.	Fees.		Average daily present.	Number present at all.	Number on Register.	Av. No. Days attended by each present at all.	Fees.	
					s.	d.					s.	d.
1.												
2.												
3.												
4.												
&c.												
B.												
Result.												
G.												
Total,												

The results for each class are got by transference from the Daily Registers; the results for the whole school are got by fresh calculation. The 'Average Daily present for Week,' the 'No. Present at all,' and the 'No. on Register,' are got by simply adding together the several class results: the 'Average No. of Days attended by each Present at all' is got by adding these results, and dividing by the number of classes.[1]

179. **Quarterly Results.**—The quarterly summary for the whole school may be of this form :—

18_____.

(1.) *Quarter ending*

	Results Week ending.	Average daily Present.	No. Present at all.	No. on Register.	Average No. of Days attended by each Present at all.	Fees. £	s.	d.
1.								
2.								
3.								
4.								
	For Quarter. B.							
	G.							
	Total,							

Its results are obtained from those of the weekly summary precisely as the results in the quarterly summary of *one class* are from *its* weekly ones. Thus the 'Average daily Present for Quarter' is the sum of the average daily attendances for the several weeks divided by 12 (weeks): the 'No. Present at all for Quarter' is the number present at all for first week of the quarter increased by the new names enrolled during the remaining weeks: the 'No. on Register' is the sum of the names of the pupils in the various classes at the end of the quarter: the 'Average No. of

[1] The rule for this result is not that embodied in the formula of the previous section; because the data are different. Hitherto we have been seeking the result in the case of one class over different periods; now we seek it in the case of a number of classes over the same period.

Days attended by each Present at all' is the 'No. of School-Days in the Quarter' multiplied by the 'Average Daily Present for Quarter,' and divided by 'No. Present at all for Quarter.'

180. **Yearly Results.**—Finally, the yearly summary of attendance for the whole school may be of this form :—

YEARLY SUMMARY OF WHOLE SCHOOL.

_____18____ to _____18____

Results for Quarter.	Average Daily Present.	No. Present at all.	No. on Register.	Average No. of Days attended by each Present at all.	Fees.		
					£	s.	d.
1.							
2.							
3.							
4.							
For Year, B.							
For Year, G.							
Total,							

(*Signature*)_____

(*Date*)_____

The 'Average Daily Present for Year' is the sum of the corresponding quarterly results divided by 4 : the No. Present at all' is the 'No. Present at all' for the first quarter increased by the number of enrolments during the remaining quarters : the 'No. on Register' is the sum of the numbers in the several classes at the year's end : and the 'Average No. of Days attended by each Present at all' is the 'No. of School-Days in Year,' multiplied by the 'Average Daily Present for Year,' and divided by the 'No. Present at all during Year.'[1]

181. **Register of School-Work.**—The connexion of parts in the various subjects of study is too important a matter to be left to

[1] *Min. Counc.*, 1853-4, pp. 17-22 ; 1856-7, pp. 40, 41 ; 1857-8, pp. 37, 38 ; 1853-4, pp. 17-22 ; 1857-8, p. 37.

the unaided judgment of pupil-teachers or assistants. The teacher should determine this for them, with more or less minuteness. When he lays down a minute scheme of study beforehand for them to follow, he must have a special register for it which shall show the lessons for the several classes, perhaps for a week or a month at a time. Such a register secures proper connexion of parts in each subject, and enables the pupil-teacher to prepare himself for his work by directing upon it his private reading and reflection. It has this one danger, however, that it tempts him to think less of the thoroughness with which his work is done than of the exactness with which he adheres to the scheme prescribed. But the measure of real, as distinguished from apparent, progress, is the quality of the work done, and not its quantity. To obviate this danger, the teacher should be very careful, in drawing up such a scheme, not to set down too much for the several lessons, and to allow time for revisals; while he must be regular in his superintendence and testing of all the school-work.

Where a scheme of lessons is not written out beforehand, it is still necessary that the teacher should direct his assistants as to the order and rate of proceeding with the instruction of their classes; and that some account should be kept of the work of each class. In the quarterly summary of the Class-Register, § 176, the right-hand column shows how this may be done. A list of subjects is given, which should be filled up either with the amount or the kind of the exercise that has been given to the class in each during the quarter. Such a record will enable the teacher to say what knowledge his classes may be expected to have; and whether enough has been done in the time allotted.

182. Register of Merit.—A column in the class-register, § 174, is sufficient to record the merit of the pupils in their studies. Each of the first four subdivisions of the column of 'marks' is filled up weekly; and the sum inserted in the fifth at the end of the month. The amount for the three months is carried forward to the proper column in the quarterly summary, § 176; in which the pupils' names are written in order of merit. The teacher may record a monthly order of merit, if he prefer it. Beside that column in the quarterly summary are two columns for 'age' and 'period since admission,' respectively; facts which it is necessary to consider along with the number of marks to estimate merit

accurately. The yearly summary contains in like manner the results for the year (§ 177).

The use of such a register depends on the manner in which the marks are assigned. They must be given for all subjects so as to recognise all talents; and good preparation must be sure of its marks. Then there must be some means used to keep account of them during the week. With younger classes, the teacher should have a separate slip of paper on which he notes the marks that have been given to each pupil for the day. These should in all cases be given in the hearing of the whole class; and the number received by each reported by him at the close of the day. Advanced classes on the other hand may quite well keep their own register of marks in such a form as the annexed, from which the totals may be transferred weekly to the class-register. This

Week ending							
Branches.	M.	T.	W.	T.	F.	S.	Total.
Bible Knowledge, . .	3	1	..	2	..	..	6
Reading, ...	1	1	..	1	1	..	4
Spelling, ...	1	..	2	..	1	..	4
Grammar, ...	1	..	..	1	..	..	2
etc. etc.							
Total,							16

has the advantage of showing the pupil's position to the parents: whilst it will serve as a basis free from all suspicion for allotting the school-rewards at the end of the year. This method of registering marks is quite independent both of 'place-taking' and of 'prizes;' which may or may not be recognised along with it.

183. Register of Fees.—A separate register may be kept for school payments, if preferred; but a column in the Daily Class-Register, § 174, will serve the purpose sufficiently. This column is subdivided into four to meet the case of those schools in which the payments are made weekly. These may be collected at roll-call on the Monday mornings by the teachers of the different classes. Weekly payments contribute much to irregular attendance, for the pupil's absence is a pecuniary saving to the parent, and casual absence at the beginning of the week frequently leads to absence for the entire week; still they are a necessity in many schools. Where the payments are monthly, there will be but one entry in each monthly page;

where quarterly, one entry at the beginning of each quarter. It often happens that the payments are made in all these ways in the same school: but that is of no consequence so far as the registration of them is concerned. The quarterly summary of the class-register exhibits the total class-fees for the quarter. In the 'Summary Register,' the columns for fees show what is the precise amount of receipts for each week, quarter, and year for the whole school (§§ 178-180).

The payments made in the several classes will naturally differ in amount according to their advancement; but, for reasons already stated, § 152, it is not expedient to charge so much per subject simply.

184. Annual Returns from Schools under Inspection.—In schools under inspection according to the Minutes of Council, certain returns are required annually of the teacher: these are exhibited in the 'log-book' of the school and in the subjoined schedule (Form IX.)

The log-book or school-diary is a stoutly bound volume of not less than 500 ruled pages, in which the principal teacher must daily make the briefest entry which will suffice to specify either ordinary progress, or whatever other fact concerning the school and its teachers, such as the dates of withdrawals, commencements of duty, cautions, illness, etc., may require to be referred to at a future time, or may otherwise deserve to be recorded; so that it presents, not reflections or opinions by him on the condition or requirements of the school, but the body of facts which make up the history of the building and the staff for the year. The summary of the Inspector's report, when communicated by the Committee of Council to the managers, must likewise be copied into it by their secretary.

The object of Form IX.—which is the same for a 'boys' (or mixed) school,' *i.e.*, a boys' school or a mixed school under charge of a master, and a 'girls' (or mixed) school,' *i.e.*, a girls' school or a mixed school under charge of a mistress—is to elicit the state of the school during the year in respect of instruction, attendance, and age of the pupils. The items of information necessary to fill it up are readily got from the various registers and time-tables:—

This Table should be filled up with Totals collected from the Time-Table and Attendance-Register of each class. In cases of doubt it is requested that application be made to the Secretary of the Committee of Council on Education.

Number of Children on the Books Aged	Boys.	Girls.	Total.
Under Four,			
Between Four and Five,			
Between Five and Six,			
Between Six and Seven,			
Between Seven and Eight,			
Between Eight and Nine,			
Between Nine and Ten,			
Between Ten and Eleven,			
Between Eleven and Twelve,			
Between Twelve and Thirteen,			
Between Thirteen and Fourteen,			
Over Fourteen,			
Total,			
Who have been in the School — Less than One Year,			
One Year,			
Two Years,			
Three Years,			
Four Years,			
Five Years and over,			
Admitted in last Twelve Months,			
Left in last Twelve Months,			
Highest Weekly Average in past Year,			
Lowest Weekly Average in past Year,			
Average attendance for past Year,			
Present ordinary attendance,			

Dimensions of	Length.	Breadth.	Height.
School-room,			
Class-room,			

Number of Children Learning			Boys.	Girls.	Total.
Holy Scriptures,					
Catechism,					
To Read.	Letters and Monosyllables,				
	Easy Narratives,				
	Books of General Information,				
To Write. From Copy	On Slates,				
	On Paper,				
From Dictation	On Slates,				
	On Paper,				
Arithmetic. Simple Rules.	Addition,				
	Subtraction,				
	Multiplication,				
	Division,				
Compound Rules.	Addition,				
	Subtraction,				
	Multiplication,				
	Division,				
	Proportion,				
	Practice,				
	Fractions,				
	Decimals,				
	Higher Rules,				
Geography,					
Grammar,					
History,					
Music from Notes,					
Drawing,					
Sewing,					
Cutting out,					
Household Work,					
Other Subjects,					

List of Books (No. of *perfect* Copies only), and Apparatus (No. of *perfect* Articles only).

185. Schedule for Grants in Aid. — The schedule which accompanies a claim to the benefit of 'Grants in Aid' has the following heading :—

No. of each Child.	Name of every Scholar who has attended more than 100 separate Meetings of the School in the Year ending —— 186 , of which attendances 16 or upwards were within 31 days of the last-mentioned date.	Aged		Total Number of Attendances at separate Meetings of the School in the Year as per Column 2.	Amount claimed per Child at the Rate of 1 Penny per Attendance after the first 100 Attendances.	Examined by Inspector, and passed in			Order of Committee of Council that the Amount paid (omitting all fractions of 1d.) be
		Years.	Months.			Reading.	Writing.	Arithmetic.	

The grant is of the nature of a capitation grant, depending on the number of children who have attended with a certain degree of regularity during the year, and can show a certain proficiency in reading, writing, and arithmetic. All pupils who have given upwards of 100 attendances (morning, afternoon, or evening each reckoning as one attendance) are divided into four groups for examination. The subjects of examination are the following[1] (see §§ 160-161) :—

	Group I. Age between 3 and 7.	Group II. Age between 7 and 9.	Group III. Age between 9 and 11.	Group IV. Age 11 and upwards.
Reading	Narrative in monosyllables.	A short paragraph from an elementary reading-book used in the school.	A short paragraph from a more advanced reading-book used in the school.	A short ordinary paragraph in a newspaper, or other modern narrative.
Writing	Form on blackboard or slate, from dictation, letters, capital and small, manuscript.	A sentence from the same paragraph, slowly read once, and then dictated in single words.	A sentence slowly dictated once by a few words at a time, from the same book, but not from the paragraph read.	Another short ordinary paragraph in a newspaper, or other modern narrative, slowly dictated once by a few words at a time.
Arithmet	Form on blackboard or slate, from dictation, figures up to 20 ; name at sight figures up to 20 ; add and subtract figures up to 10, orally, from examples on black-board.	A sum in any simple rule as far as short division (inclusive).	A sum in compound rules (money & common weights and measures).	A sum in practice or simple proportion.

But scholars attending in the evening only may be presented for examination in any group at the discretion of the managers.

186. Advantages of Registration.—The advantages of accurate registration are obvious on a moment's reflection. Registration of *time* enables the teacher to keep his school in an orderly state of study, and to economise time. Registration of *attend-*

[1] See Minute establishing Revised Code, July 29, 1861.

ance enables him to know the state of attendance at any time past or present; is of importance in explaining the degree of progress made by his classes; and is in itself a strong stimulus to regularity on the part of the pupils. Registration of *school-work* enables him to maintain a stricter connexion of parts in the pupil's study, and to judge whether the work performed is proportionate to the time spent in it. Registration of *merit* enables him to tell the character of all his pupils for ability and diligence, and to bestow his rewards with justice. Registration of *payments* places him in the position in which every prudent man desires to be, of knowing the state of his own affairs, and of being able to regulate his expenditure with a certain knowledge of his income. And, finally, all the departments of registration enable him to afford to the authorities of the country that information which is necessary for them in their endeavours to administer and extend educational operations so as best to meet the wants of society. It may appear at first sight a long and troublesome process; but it is really not so, when methodically gone about. The short time, indeed, which is needed daily, weekly, quarterly, and yearly, to make and to check the necessary entries, renders it preposterous to raise any serious objections to it on the score of time. Even if it consumed more time than it does, however, the great advantages accruing from it would amply repay the sacrifice.

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187. Examples.—The following examples are added for the sake of practice :—

1. Classify under a few heads the information required in Form IX.; and specify from what Registers it may be obtained.

2. To what Registers should the teacher refer to fill up the Capitation Schedule?

3. In a school, the average attendance for the four quarters is respectively 94, 95, 96, 97.5, and the number present at all has been 100. In a year during which there have been 6 weeks of vacation, and 10 occasional holidays, what is the average number of days' instruction received by each present at all? Calculate the result (1.) on the supposition that there are 5 school-days weekly, and (2.) on the supposition that there are 5½.

4. Suppose a class numbering 50 in actual attendance at a certain date; in the previous quarter 2 pupils have been absent from sickness, 3 have left,

and for 9 promoted to a higher class 9 have been enrolled. The average attendances for the several weeks have been 45, 44, 43, 42, 41, 40, 40, 41, 42, 43, 44, 45, there are 5 school-days in the week, and the holidays have amounted to 7 days; find the average number of days attended by each present at all.

5. From the following extract from a Register, calculate the average age of the children, the average attendance for the week, the number present at all, and the average number of days attended by each present at all.

Age.	M.		T.		W.		Th.		F.	
10½				s	s	l				
8½	s	s	s	s						
9½		a	a	a						a
12½		a			l			s	s	
11¾						l	l			
10¾		s					s			s
12			a	a	a	a	a	a		
8	l	s	s							
9½	l	l	l	l	l					s

6. Suppose the following table to be an extract from a school-register of daily attendance: What is the average number in attendance for whole days in the first, second, third, and fourth week (5 days) respectively? What is the average when extended to the four weeks collectively? How would the average be found for the whole year?

	1.		2.		3.		4.	
	Morn.	After.	Morn.	After.	Morn.	After.	Morn.	After.
Monday, ...	51	47	55	50	61	59	64	57
Tuesday, ...	53	50	59	54	58	60	59	58
Wednesday, . . .	35	39	57	56	55	51	52	56
Thursday, ...	52	48	53	53	53	56	40	38
Friday, ...	55	46	54	47	54	46	41	37

7. Explain how it is possible that the total average attendance in a school may be high as compared with that of other schools, and yet the average number of days on which each child has attended may be low.

8. Given the number of half-days that each child has attended, and the number of half-days that the school has been open, during a quarter, how do you find the average attendance for the quarter?

APPARATUS.

By school-apparatus is denoted the materials necessary for giving and illustrating lessons.

188. **Apparatus for Use in the Reading-Lesson.**—In many schools the reading-books are the property of the school and not of the scholars: but that school is in a much better position in which the pupils have books of their own. The reading-books in use are so numerous and accessible, and so often determined by local circumstances, that it is unnecessary to specify what sets are the best. For the alphabet, the school should possess a box of letter-cards and a frame to arrange them on: and for the first steps in reading, a set of tablet-lessons and suitable standards.

189. **Apparatus for Arithmetic and Writing.**—For the younger classes the ball-frame is requisite:—a square frame of wood from fifteen to eighteen inches long, crossed with twelve horizontal wires, each strung with ten balls, differently coloured, the left half being covered in front so as to conceal all the balls except those with which the teacher is operating, and the whole firmly fixed on a strong standard about three and a half feet high. The slates used in school are generally the property of the pupils: but it is much more convenient that they should be school property, each class having its own box of slates (unframed) attached to it. The class-work is less liable to interruption in this way; and they can be ruled uniformly, when ruling is required. The pupils should have slates of their own at home for working. A set of the standard measures should be in every school.—For the sake of uniformity, the writing copies should be supplied by the school. The copies of the younger classes should not be set with headings, the specimen on the black-board supplying the place of these; those of the advanced classes may be thus set, but it is a better plan to have the 'specimens' on separate slips. The copy-books should contain few leaves, that they may be frequently

changed, and thus be kept cleaner: the paper should be of fine quality. Steel pens are in universal use from their convenience: each class should have a box for its own: in the advanced classes each pupil may have a pen for himself, if instead of a box there be used a thick board with holes in the surface, into which the pen-holders are inserted. The chief difficulty with regard to pens is to get them kept dry and clean; for this purpose, as well as to keep the copy clean, the pupils should be provided with pen-wipers and blotting-paper. If the ink is good, as it should be, the teacher has only to arrange that some one shall be responsible for having the ink-wells covered at the end of the lesson. Large diagrams of the letters, upon a frame-work of lines (such as Richson's copies), will be found useful in analysing the letters before a class.

190. Geography.—The chief item required for this instruction is maps. The supply will depend on the extent to which the study is carried in any school. The following is the order in which they may be procured:—map of the parish or district—map of the country—the world in hemispheres on Mercator's projection—the four continents—Palestine—parts of the British Empire—a few of the most important foreign countries. School maps should have the physical features well marked, and should not be over-crowded with names of unimportant localities: the best are those of Sydow (English edition), Stanford, and Hughes. A terrestrial globe is indispensable: so are a few diagrams for illustrating the shape of the earth, day and night, and the seasons: a small sphere painted black will be found useful for explaining latitude and longitude. Copy-books should be provided for map-drawing.

191. Black-boards.—Each class should have its black-board. Slate is sometimes used instead of wood, but it is heavy and expensive: wood is therefore generally used, though a certain kind of prepared canvas is not uncommon. Not to mention the finer woods, which are beyond the means of the common-school (such as mahogany and lancewood), birch is perhaps the best adapted for the purpose; but common deal will answer sufficiently, if properly seasoned and well stained. The board should be provided with a border to prevent it from warping.—The black-board may be suspended in various ways. The simplest is to

suspend it on the wall, where that is practicable : otherwise, it may be mounted on a frame, either sliding up and down, or turning like a looking-glass ; but the most convenient way is to place it on an easel, which has the advantage of being inexpensive. The instrument used for supporting the black-board may easily be fitted up so as to serve the purposes of a map-stand at the same time. A pointer should be provided for each board, and a nail or other suitable rest found for it. Refined chalk should be used for writing. To keep a black-board in proper order, it must be often sponged or wiped down with a damp towel, and occasionally re-stained.

192. Pictures, Objects, and Books.—For illustrating the lessons of the younger classes more particularly, the school should have some sets of pictures ; *e.g.*, of Scripture incidents and customs ; of natural history, men, animals, and trees ; and of processes in manufactures. It should also have, if practicable, a collection of objects, specimens of textile fabrics, vegetable and animal products, minerals, etc., to illustrate oral and reading lessons.

A small library may be turned to most valuable account in school ; chiefly in fostering a taste for reading amongst the pupils, and in drawing out thereby their general intelligence. But to secure these benefits, it must be selected with special reference to the capacities of the readers, and the teacher must encourage the use of it by interesting himself in what they read. There is another direction, not less important, in which the school-library should be furnished. The teacher is expected to provide himself with the various books he may require for his professional work ; but there are some which are beyond his means, and particularly beyond the means of the pupil-teachers. It would be wise policy to provide in the school-library such books of reference in the various subjects as are necessary to the full preparation and intelligent handling of the lessons.

APPENDIX ON SCHOOL STRUCTURES AND FURNITURE.

193. Construction of School-Room.—A completely equipped school contains the following parts :—The school-room itself, class-room, lobby or entrance-room, teacher's room, playground, and offices. The school is commodious according as these parts are

conveniently constructed in themselves, and conveniently connected with each other.

The School-Room.—The best shape for the school-room is an oblong, about twice as long as it is broad; being that in which a larger proportion of the entire space is available for teaching than in the square or any other form. The size must depend on the expected attendance. The *Minutes of Council* allow nine square feet to each pupil; but eight square feet in the principal class-room will be found adequate, if there is a class-room attached. Very large school-rooms are not expedient; if a numerous attendance is expected, more effective teaching and superintendence will be obtained by dividing the school into two (or more) moderately-sized apartments, and contemplating the employment of one or more assistants to the teacher. A school-room should always have a lofty ceiling; twelve feet may be taken as the minimum for a good school-room, but fifteen may be mentioned as the average height if the room is large. A lofty ceiling gives facilities for ventilation which are otherwise unattainable. Schools should never be constructed in flats, if another plan be practicable: and if the teacher's dwelling-house is under the same roof as the school, it should be contiguous to the school-room, not over it.

Class-Room.—All schools, except the very smallest, should have a separate class-room attached to the main-room; and large schools should have more than one. There are certain lessons which cannot be given to a class with full effect except in retirement. This apartment is subject to the same general rules of construction as the school-room itself. Its size must depend on the size of the school; it should be fitted with a gallery of writing-desks, to serve either for oral instruction or for writing. Whilst in immediate connexion with the school-room, it should be completely separated from it so far as noise is concerned.

Lobby or Entrance-Room.—This should not be looked on as an ornamental appendage to a school, but as a necessary part of it. In a large mixed school it should be double. In any case, it should be commodious as an entrance, properly fitted up with pegs round the walls, thoroughly dry, and well-lighted; and safe to such a degree as to give the pupils perfect confidence in leaving their property in it. It should moreover be under strict regulations: each class should have its own space, each pupil his own peg, and some one should be in charge when the school meets and dismisses. A school-building of any pretensions to excellence will have a supply of wash-hand basins, scrapers, and mats in connexion with its lobby; and it will not grudge a good deal of tear-and-wear in such articles.

Teacher's Room.—When the teacher's dwelling-house is contiguous to the school-building, he will not need a special room for himself in school. If this is not the case, then it is reasonable to expect that in a large school there should be set apart a small room for the use of the teacher, both for business and for his retirement during intervals. Such a room may be made useful in various

ways; *e.g.*, in connexion with the pupil-teachers, and the school-library or museum, if there be one.

194. Physical Circumstances of the School.—The teacher's attention is particularly due to the sanitary condition of his school, in its three great branches of *light*, *ventilation*, and *temperature*.

Light.—The provision for lighting a school should have two ends in view: a proper amount of light and its just distribution. As has been already seen, § 131, the effect both of an excess and of a deficiency of light is to strain the

NOTE.

Page 212, lines 6, 7, 8; and page 147, note 2.

Since this was printed, the REVISED CODE of *the Committee of Council* has appeared, requiring an allowance in the principal School Room of "at least 80 cubical feet of internal space for each child in average attendance;" and, in the case of new Schools, that the entire site of the School Buildings shall not be less than 1200 square yards in area.

so as to absorb the light unduly, nor too glaring, so as to dazzle the eye by reflection. Of the colours commonly employed, viz., the white, the ochre, the stone-colour, and the lightish brown, the two last are obviously to be preferred.

Ventilation.—The importance of this for the health of teacher and pupils has already been insisted on. (§ 129.)

Various scientific modes of ventilation have been proposed; but it does not appear that any one is recognised as having been universally successful. In the meantime, therefore, we must hold by the natural means of ventilation. The school-room should have a lofty ceiling; windows placed high in the walls, so as to be pulled down from above and raised from below, without danger of causing drafts about the pupils' heads, and in such a relation to

conveniently constructed in themselves, and conveniently connected with each other.

The School-Room.—The best shape for the school-room is an oblong, about twice as long as it is broad; being that in which a larger proportion of the entire space is available for teaching than in the square or any other form. The size must depend on the expected attendance. The *Minutes of Council* allow nine square feet to each pupil; but eight square feet in the principal class-room will be found adequate, if there is a class-room attached. Very large school-rooms are not expedient; if a numerous attendance is expected, more effective teaching and superintendence will be obtained by dividing the

well-lighted; and safe to such a degree as to give the pupils perfect confidence in leaving their property in it. It should moreover be under strict regulations: each class should have its own space, each pupil his own peg, and some one should be in charge when the school meets and dismisses. A school-building of any pretensions to excellence will have a supply of wash-hand basins, scrapers, and mats in connexion with its lobby; and it will not grudge a good deal of tear-and-wear in such articles.

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194. Physical Circumstances of the School.—The teacher's attention is particularly due to the sanitary condition of his school, in its three great branches of *light*, *ventilation*, and *temperature*.

Light.—The provision for lighting a school should have two ends in view: a proper amount of light and its just distribution. As has been already seen, § 131, the effect both of an excess and of a deficiency of light is to strain the eye and cause depression of spirits, especially as the day advances. With regard to distribution, all the parts of the school should be equally lighted: which may be more easily done with a few judiciously placed windows of respectable size than with a number of smaller straggling apertures. Good ways of lighting a school are these:—(1.) Perhaps the best of all is when light is admitted from the roof, as it is then steady, equable, and free from shadow. (2.) The windows may be placed in the ends of the school-room, or in two adjacent sides, so as to admit the light from the pupils' left. Where there are windows in front of the classes, they should be at some distance; and in every case they should be at such a height in the walls as to remove all danger from drafts when they are opened. School windows should be of the same shape as ordinary house windows; at any rate, lattice windows with numerous small lozenge-shaped panes of glass should be avoided, as the light transmitted through them is so broken as to be extremely fatiguing to the eye.

Two other topics connected with the management of light are important. (1.) Each window should be fitted with blinds to moderate the intensity of light when necessary, particularly to exclude the direct rays of the sun. If the windows are used for ventilation as well as lighting, the difficulty of using the blinds in such a case may be obviated by having a fixed Venetian blind outside the window at the top, and hanging the blind on a level with the bottom of it. (2.) The tint of the school-walls should neither be too dull, so as to absorb the light unduly, nor too glaring, so as to dazzle the eye by reflection. Of the colours commonly employed, viz., the white, the ochre, the stone-colour, and the lightish brown, the two last are obviously to be preferred.

Ventilation.—The importance of this for the health of teacher and pupils has already been insisted on. (§ 129.)

Various scientific modes of ventilation have been proposed; but it does not appear that any one is recognised as having been universally successful. In the meantime, therefore, we must hold by the natural means of ventilation. The school-room should have a lofty ceiling; windows placed high in the walls, so as to be pulled down from above and raised from below, without danger of causing drafts about the pupils' heads, and in such a relation to

each other as when opened to lead to a continuous passage of air through the room; and flues in the roof or wall for the escape of the foul air. No school needs to be without such a provision; and, if the teacher has it, he is comparatively independent of scientific appliances.

Where he has not this provision, he can only have recourse to occasional shifts to mitigate the nuisance of defective ventilation. He will, *e.g.*, have the room well-aired before the children enter it in the morning; again during the interval; he will even give more than one interval for the purpose: any windows that can be kept open he will keep open, and he may find opportunity of opening others during a short time at some change of classes; and he will not overlook the school-door in his search after expedients to obtain fresh air.

Temperature.—The distinction between cold air and fresh air is often but dimly apprehended. Air may be cold without being fresh: and fresh air does not need to be cold. What is wanted in school is an adequate supply of fresh air at a suitable temperature. It is only in the winter season, of course, that any question can arise about temperature. Various scientific modes of heating, as of ventilation, have been proposed, but the same remark may be made of them; that none of them is generally accepted as preferable to the ordinary heating apparatus used in houses. The open fire, though somewhat expensive, is the safest, most wholesome, and most cheerful source of heat which the teacher can have. In managing it, all that needs to be attended to is to have it railed off to prevent accidents; and to see that the temperature of the room is not raised too much, for reasons already stated.

195. Playground.—The last part of the school to be noticed is the playground with its adjuncts. It is desirable that every school should have its own playground, in which the pupils may be free from interruption in their recreation, as well as from any influences over which the teacher has no control.

The playground should be thoroughly dry in soil, and kept free from surface-water; covered with small gravel, rather than pavement, which is somewhat dangerous, or with grass, which retains the rain; sheltered from inclement winds; of sufficient size to give scope to the pupils for running about; if practicable, provided with poles, bars, and ropes to encourage gymnastic exercise.

Attached to the playground should be the offices; of which it may suffice to say that they should be retired, commodious, efficient, and kept in good order. They should be frequently inspected by the teacher; not less for the comfort of the school, than for the great influence they may have on the pupils' notions of decency and cleanliness. It is by much too often the case that this part of the school-building is left to a fate as injurious to the pupils as it is discreditable to managers and teacher.

196. School-Furniture.—School-furniture, which includes everything that is requisite for the accommodation of the teachers and their classes, consists

of three principal items—benches, desks, and gallery. With respect to *benches*, the chief object is to provide a sufficient supply for the school, and of convenient dimensions. They may be of different lengths to suit the plan of the school, and they must be of different heights to suit the different ages of the pupils: they may be made simply as seats, or they may have shelving below the seat to contain the pupils' books. They should never be made without supports for the back.—*Writing-desks* are provided sometimes for the whole school, sometimes only for a part of it. The old cumbrous double desk is now nearly disused; so is the desk placed against the wall. The writing-desks should be in parallel rows, rising slightly as they recede; with considerable space between for passage; strictly suited to the age of the pupils, both as regards the height of the desk from the floor and its height above the seat; sloping but slightly, with a ledge at the top for pens or pencils; and with ink-wells properly protected by some covering from dust. Sometimes the desks are made to fold so as to serve for a gallery for other lessons. It is more convenient to have the seats moveable.—The *gallery* must be regulated in size by the number of children for whom it is provided; but, except in some infant-schools, should not be made to hold above 80 or 90 pupils. From 13 to 18 inches is a proper allowance of space to each pupil; the height of the seat must depend on the age of the occupants; supports should be provided for the back; and there should be a passage for entering on both sides of it: its ascent should not be very steep, and its breadth should not exceed what can be taken in by the eye at one glance. It is expedient that this, and the parts of furniture already mentioned, should be well painted.—The only other items of furniture that need to be adverted to are *presses* for the school-apparatus, and a *desk* for the teacher. Of the former there should be a sufficient supply, thoroughly dry and clean; fitted up according to the nature of the articles which they are intended to contain, whether maps, books, or slates; and under lock and key. As to the latter, it should be such as to contain in security the teacher's books, registers, stationery, and the like, and to give facility for his own writing; its shape is entirely a matter of taste. Whilst engaged in teaching, the teacher requires neither seat nor desk; but, in teaching his higher classes, a reading-board would be found convenient. Ample information as to the materials and dimensions of all the articles that have been mentioned will be found in the *Minutes of Council*.[1]

The teacher should secure that adequate provision is made for school-cleaning: that is, for the daily sweeping of the room, dusting of the furniture, and occasional washing of the floor and walls. This is valuable not only from the comfort to which it leads, but from its good moral effect. When the teacher is careful and regular in this matter, the pupils must be

[1] *Min. Counc.*, 1839-40, Minute on Plans, p. 46; 1844, pp. cliii.-clv.; 1850, pp. 413-15; 1851, Mem. on Organization; 1857-8, pp. 271-74.

influenced by his example. Thorough cleanliness and order in a school-room always prepossess a visitor in favour of a school, and are still sufficiently rare to receive special notice when they show themselves.[1]

CHAPTER II.

DISCIPLINE.

By Discipline we understand the application of the motives which prompt the pupil to diligent study and to good conduct. These have been already named (§ 25).

LOVE OF ACTIVITY.

197. Love of Activity.—The love of activity is the great instinct which urges on our nature to its development. Body, mind, and moral feeling all owe their growth to exercise. Every one lives with some object in view, the attainment of which may bring him power and influence: it is by activity alone that this object is to be attained. No condition of life is so miserable as that which is marked by aimlessness and stagnation, and has no consciousness of power or usefulness: from this the craving for activity delivers us.

As with the man so with the child: his life is from the first one of unceasing spontaneous activity. He learns very much in this way long before educational processes can lay hold of his faculties. By his infinite physical activity he comes to know the powers of all his bodily organs, and by the exercise of his senses the most important properties of the objects about him. In yielding to the impulses of this instinct he is working himself into experience of the life upon which he has entered, and thus rising above the weakness of his infant state. With activity are bound up all his aspirations: it is indeed his life and happiness. This fact should be recognised throughout his whole education.

[1] *Min. Counc.*, 1839-40, pp. 85-92 and elsewhere; 1844-5, vol. i. pp. 131-8; 1847-8, pp. 148-50; 1848-9, p. 38; 1855, pp. 335-37, 390-1; 1856, pp. 341-2; 1857-8 (Mr. Mitchell's Report). See also Barnard's *School-Architecture*, Burn on the *Arrangement of Schools*, and the references in Part i. chap. xi.

198. Conditions of its Application.—According to his enlightenment the teacher may deal with this instinct in different ways.—(1.) If he is ignorant of the nature of the being whom he has to educate, he will not provide for it at all. In which case, as he cannot get rid of it, he will find it troublesome; constantly seeking to open up for itself new channels of action instead of those which he has closed. He will soon notice on the part of the child thus unnaturally cramped an irregular and unhealthy activity; which will interfere with prescribed work; which he will therefore feel himself obliged to endeavour to suppress; which will necessitate harsh measures; which he will withal only partially succeed in restraining; and in dealing with which it is difficult to say whether success or failure is the more to be deplored. "There is nothing in which parents [and teachers] are often more tyrannical and unreasonable than in expecting children to be quiet and good and give them little trouble, when they will not put themselves to a little trouble to find suitable occupation for the active and restless faculties of their children. The trouble that a child gives to those in charge of it should very often be viewed as an effort of nature to recal them to their neglected duty."[1]—(2.) With a greater, but still an imperfect, degree of enlightenment, he may recognise this instinct, and strive to provide for it: but he may misdirect it, setting before the child what may be quite right in itself and proper for the matured activity of an adult, but for which he is not yet ready: treating him, in short, not as a child, but as a man. Thus it is that the child often has his happiness and progress thwarted by well-intentioned but ill-judged interference with his natural activities; the result being, not that he adapts himself to those which are set before him, but only that he acquires a distaste for them when the time arrives at which they might become natural. For the inattention and trifling shown by him in these circumstances, the teacher is directly responsible. This failure arises from want of accurate observation of the symptoms which the child abundantly exhibits of his real adaptations, or from want of sympathy with child-nature; either of which disqualifies for successful teaching. —(3.) To reap the full benefit of this instinct, the teacher must appeal to it as it exists in the child's nature, giving scope to the

[1] Reid's *Principles of Education*, chap. iii.

mental activity of the pupil while he is under direct instruction; calling into exercise the faculties in the order in which these are developed, first the senses, then the imagination, and then the reason. Nor should he content himself with their passive exercise: he should secure their active exertion by his questions and exercises. In particular, no opportunities of constructive exercises, which employ the hand as subservient to the intelligence, should be overlooked; room may be found for them in almost every branch of instruction. In this way the teacher's whole method of instruction may be brought to support his discipline. But he has also to keep his pupils suitably employed when they are not receiving direct instruction from himself, whether by putting them under charge of a competent assistant, or by prescribing exercises to be performed by them for his own subsequent examination. In this way his faculty of organization comes in aid of his discipline.

In using this instinct of activity to the full, the teacher must guard against abusing it: which he may do by overstraining as well as by misdirection. Great is its power of working; but the same kind of work must not be too long protracted. This will exhaust its force as a motive, and reduce the pupil to the same prostration as results from its neglect. In point of fact, not a little of the harshness of discipline which prevails in schools is owing to the difficulty in managing children in this exhausted state. The languor of accumulating work must be relieved by recreation and by variety; and the younger the pupils are, the larger the measure of physical activity which should be combined with that which is mental.

199. Its value as a Motive.—The proper regulation of this instinct is no small part both of mental and of moral education. It leads to attention, diligence, and regularity in study; and will leave only some exceptional cases of natural indolence or of fitful inattentiveness for the teacher to remedy by corrective measures. It keeps the pupils out of the way of faults, and of forming bad habits: it gives to their whole disposition a facility and a pliancy which greatly increase the teacher's power of moulding character. It enables him to dispense with the motive of fear, which, when it rules, is incompatible with good discipline, as putting the whole school in a false relation to all the ends of moral education: and it will leave only some exceptional cases of depraved

temper or of defect in previous training, to call for correction by punishments. The teacher who can wield this instinct has alone the true science of governing children; he turns into the greatest aid to his success that which would otherwise be its greatest obstacle.

LOVE OF KNOWLEDGE.

200. **Love of Knowledge.**—Curiosity, or the love of knowledge is, equally with the love of activity, a natural instinct: though perhaps less evidently so. It does not show itself equally active in all: in some it is not active at all: but we must allow in such cases for the influence of habit, which may have weakened it by directing it to trifling objects, or even extinguished it from inanition. It is very active in early life: allowing that there are some children who are of sluggish temperament and not easily roused to exertion, it will be admitted on the whole that the mind of childhood is remarkable for its curiosity. How eagerly does the child listen to the story or the description which he can understand! how attentively does he follow the course of conversation, lest anything should drop which he can appropriate! how pertinaciously his queries on subjects in which he is interested are addressed to those whom he believes able and willing to answer them! The operation of this instinct is to be explained in the same way as that of his love of activity. In gratifying it, the weakness which besets him during early life in a world still strange to him wears off: he feels that knowledge is power.

This instinct is apt to act in a morbid direction, unless subjected to prudent restraint. It often aims at objects, and works by means, which are inconsistent with honourable character; as when it peers into the private concerns of others, or gathers information about matters of indifference, in a stealthy eaves-dropping way. Curiosity, when acting under an ungenerous spirit, becomes the minister of slander and falsehood: it must therefore be vigilantly regulated.

201. **Conditions of its Action.**—In early youth this instinct has a bent, not so much towards particular *subjects*, as to particular *modes* of exhibiting subjects. The child has no sympathy with, because he cannot understand, what is abstract and tech-

nical. He shows no particular eagerness in learning words by their sounds alone, or the names and positions of places on a map, or operations with pure number. But he finds pleasure in learning to read when suitable illustration of the sense of the passage accompanies his effort, or the names and positions of places when their natural features have been described and some interesting incident associated with them, or rules of numerical operation in their application to concrete quantities, such as the tables of value which he has occasion to see in daily use. The knowledge in which he delights is that which gives scope for the activity of the faculties of mind which he has at command: to him no other is *real*. The tendency towards a *particular subject* implies a considerable mental development; in the course of which there has been discovered a certain adaptation of the subject to the cast of the pupil's mind. The child has not this development: so that though we cannot say that all subjects are in themselves equally interesting to him, his preference for any one is not of that decided nature which leads him, in choosing it, to reject the rest. His mental life is still too fresh, and therefore too indiscriminate in its desire for knowledge, to admit of that. At the same time, whilst we say that all subjects may be made interesting to him, the interest attaches to them in different ways. Some lessons attract him from their matter, as appealing to the senses or the imagination in whose exercise he finds so much pleasure: for such he shows a spontaneous craving. Others, such as reading and writing, are more mechanical in their nature, and in themselves less attractive: but the child's love of knowledge will operate with ample strength here if we make the pupil conscious of the utility of the study by showing its bearing upon his wants in life, and connect it with his love of activity. In such lessons we can interest him by methods of instruction which shall exercise his intelligence and his constructive power of hand. All the subjects of early instruction may be made interesting, if only the methods adopted be in consonance with the child's nature. Not that he will always freely give himself to work; but, granting that the exercise of authority is often needed to make him bend his mind to his lesson from some other pursuit, it still holds true that under a good method of teaching he will not have proceeded far with it till he feel his interest awakening.

With advanced pupils, curiosity manifests itself in special directions of study : thus one has a turn for language, another for arithmetic, a third for natural history, and so on. This also is a most beneficial provision : for it restricts the objects of study within attainable limits, and thus renders eminent success in these possible, instead of allowing effort to dissipate itself over too wide a surface in the vain attempt to grasp all branches of knowledge. It is not to a great extent that the common-school exhibits these tendencies in its pupils ; but where such a settled bias is apparent, as distinguished from a mere temporary caprice, the teacher should certainly consult it by not pressing too severely on the pupil branches of study which have less attraction for him. For the sake of schools where the pupils are of comparatively advanced age, it may be remarked that the worst results may flow from urging on a pupil with a study for which he seems to have a natural distaste ; his almost necessary failure is the least of these ; there may spring up a dislike to all study whatsoever, and to the teacher himself, which, by necessitating harsh means of discipline, may seriously injure his disposition and temper.

The love of knowledge being "the great instrument Nature has provided to remove that ignorance they were born with," must be encouraged in children. This is done by resolving "not to check or discountenance any inquiries he shall make, nor suffer them to be laughed at ; but to answer all his questions, and explain the matters he desires to know, so as to make them as much intelligible to him as suits the capacity of his age and knowledge. . . . As children's inquiries are not to be slighted, so also great care is to be taken that they never receive deceitful and eluding answers. They easily perceive when they are slighted or deceived ; and quickly learn the trick of neglect, dissimulation and falsehood, which they observe others to make use of." [1] Their inquisitiveness should not be displeasing. The spontaneous exhibition which it affords of their wishes and wants in respect of information, and also of the mode of their minds' action, give to the parent or teacher the best opportunities of training which can occur. If they are reproved as troublesome, or put off with evasive answers, they will soon sink into carelessness ; and the greatest spring of improvement is broken. A pretence for this

[1] Locke, sects. 118-120.

course is often found in the alleged danger of encouraging them in forwardness and loquacity. These are faults unbecoming in all, and particularly in the young; but a very moderate degree of tact is sufficient to guard against them. The gratification of their rational curiosity, indeed, may be used as the most powerful instrument for this purpose.

The greatest danger to this motive lies in the tendency to supersede it by others, it may be of a lower character, but in any case stronger at first and more easy available. Thus the love of distinction is a good motive, as long as it is kept in its proper place of subordination; but, when it is relied on as the predominant motive, it chokes the growth of the love of knowledge. The pressure of authority is often required to keep the child steadily at work; but mere compulsion excludes the action of all right motives. He will never love knowledge unless he is attracted to it, and feels that his freedom is respected. This motive is not only one of the most exalted kind, but is jealous of its character; no appeals to it have any influence unless under a full recognition of its honourable position.

Finally, ere this motive of curiosity can operate with any force at all—and the same remark applies to the love of activity—there must be a good moral relation between teacher and pupil. Where there is not mutual confidence, it is not to be wondered at that the pupil should be careless of any knowledge addressed to him, as it cannot be offered in any spirit of sympathy with his wants. The teacher, therefore, who would command these powerful instruments of progress, must consent to obtain this command by showing regard and affection for his pupils.

202. Its value as a Motive.—The proper regulation of this noble instinct has an important bearing on moral, as well as on intellectual, education. Whilst, on the one hand, it leads, more than any other motive, to that free and self-sustaining application which is at the bottom of all eminent attainment, it powerfully conciliates, on the other, the good-will and obedience of the pupil. For children feel gratitude and respect to the teacher who imparts to them suitable knowledge; and, in proportion to their sense of the obligation, they become disposed to submit themselves to him in matters of general conduct. It is obvious that good moral education is necessary to good intellectual: but from what has

been said in illustrating the operation of the two instincts now named, it appears that the habits of mind induced by enlightened intellectual education have no inconsiderable influence on good moral training; the different parts of our complex nature acting and reacting upon each other.

INFLUENCE OF EXAMPLE.

203. Example of the Teacher.—No one is ignorant of the powerful influence of example. Members of the same family, or of the same society, are found to have certain well-marked resemblances: in the most trifling peculiarities of conduct, as well as in the dispositions which determine their whole character. Personal carriage and manners, tones of the voice and habits of expression, views of the various incidents of life, modes of thinking, and the standard of morality by which they regulate their own lives and judge their neighbours, are all biassed in one common direction by the mutual influence of long-continued intercourse.

It is by a natural instinct that we imitate the example of others. Results which reach the mind through the senses are always more impressive than those which are communicated in the abstract language of precept. This is true of the actions of life not less than of the facts of science. Accordingly, an action which we may have seen performed in certain circumstances, strongly presents itself to us again when we find ourselves placed in similar circumstances, and its mere priority of occurrence under our observation almost inevitably constitutes it a rule for our procedure. This is the more so when the acts are those of persons whom from any quality, such as their greater knowledge, authority, or power, we feel to be our superiors. By acting as they act, we seem to ourselves to rise to share in their knowledge, authority, or power. It is their acts, rather than their words, that we associate with these attributes; what they do, we accept as the sincerest evidence of what they are. In youth the principle of imitation is very strongly operative, because that period of life is but little restrained by any countervailing power of judgment. The conduct and character of the child, not to speak of the complexion of his mind, depend as much on the conduct and character of those about him, as on any innate mental or moral qualities which he possesses.

We may say that example is the most powerful of all the means of education. The teacher whose life is a worthy example for his pupils, does more to form their character to virtue than he can do by all his instructions and all his laws. He is himself his own best law: from the living law there flows an inspiration which is the strongest sanction to all the laws which he promulgates in words. It is not only during the time of school-intercourse that he influences their conduct. If he exhibits in his own person the virtue which he teaches; if he is generous in spirit and uniform in temper; if to a self-evident spirit of justice in all his relations with his pupils and an unimpeachable regard for their welfare, he adds refinement and dignity of manner; if he is temperate, pure, and pious; he implants in their minds a high ideal of character, which remains permanently with them for imitation. Thus his influence continues over them long after they have exchanged the duties of school for the business of life, urging them forward to what is noble, and restraining them from what is wrong. Such an ideal is perhaps the rarest and most precious gift the school bestows. By every consideration of his own duty and his pupils' well-being, is the teacher bound to be mindful of the great responsibility which attaches to him for the example he sets; the responsibility, common to all who are placed in a prominent position, of faithfully acting out the dictates of his own conscience that he may regulate and strengthen the consciences of others. Thus he will not only enjoy the happiness which the virtuous man derives from doing what is right, but the still greater happiness which arises from leading others to do good. Whereas, if his own conduct is not such as should be imitated, he must have the poignant regret of knowing that he has been leading astray those whose youth led them implicitly to trust him, or endure the contempt of those whose more matured moral judgment has maintained them in their integrity against the influence of his example. It will be no consolation to reflect that his teaching, moral and religious, may have been abundant, faithful, explicit: so far from undoing, this perhaps rather aggravates, the effects of bad example.

204. **Conditions of this Influence.**—That his example may attain all which it is capable of attaining, it must not only be good, but consistent with itself: and this is a matter of no small difficulty, when we reflect over how long a time, and under what

variety of circumstances, it is exhibited. With reference to his school, nothing which the teacher can do is private: not only his bearing during instruction, but his ordinary intercourse with his pupils, his passing remarks, and his personal habits have all a public influence. What a spur should it be to vigilance that everything he does is marked by so many observant eyes, and treasured up in so many retentive memories! How serious the consideration that even a single act may be afterwards pleaded by its witnesses for or against a virtuous habit! And when he reflects that no allowance is made for any of the moods into which the incidents or temptations of life or of the school may throw him, how urgently is he prompted to watchfulness and self-control! Nothing but the deepest conviction of the force of example will maintain his efforts after that uniformity of conduct in which the great power of this motive lies. He must, moreover, be careful of the appearance of his actions as well as of the actions themselves. For an action may be of good intent, and yet so performed as to throw suspicion on its character. Every act of the teacher is looked at from so many points of view, that, if there be anything ambiguous in its performance at all, it is almost certain that it will cause some to stumble.

The influence of example, like that of the motives which have been already named, is subject to certain moral conditions. The pupil does not imitate all actions with equal facility. Things which are indifferent, such as peculiarities of manner, he readily falls in with; and any example which seems to lend sanction to the self-seeking and license in which he is fain to indulge, he is but too glad to plead in excuse for himself. Good conduct requires self-denial, and is therefore difficult for him, at least in many of its aspects, to make up his mind to. Hence the example of the teacher must rest on the double foundation of love and power: love to draw the pupil on to perform what is against his inclination, by making its performance more pleasant for him than its omission; and power to command his respect when it exercises on him that pressure which is needed at the commencement and in the early stages of the formation of habits. Unless he feels the influence of these two qualities, he will imitate good example only when it suits him, and at the best but imperfectly.

205. Power of resisting Bad Example.—Finally, the ten-

dency to imitation is an instinct of which the pupil's education should leave him in full control, so that he may guard himself against the many bad influences to which he will be exposed in life. This end is to be attained by setting before him a good example whilst his education is going on, and by accustoming him to the exercise of moral judgment upon the incidents that are suggested, either in the course of regular instruction or in the life of the school.[1]

AUTHORITY OF THE TEACHER.

206. Necessity of Direct Authority.—By authority, as here used, we mean the expression of will; whether by voice, gesture, or mere presence. This is the external motive to which we naturally first look to supplement the force of the innate motives whose action the child feels within himself. Various considerations forbid us to trust to his innate motives alone for the performance of even what he knows and feels to be his duty. Thus, a first obedience may require the aid of some strong stimulus to overcome contrary tendencies which he may have acquired, or mere inertia: the innate motives, granting them to be in general sufficient to sway him, may be overborne for a time by some overmastering desire which has seized him; besides, a constant pressure, steadier than that which innate motive can exercise in youth, is necessary to form a virtuous habit. There are none in whom their natural tendencies are sufficient for all duty, and there are some in whom these tendencies are either exceptionally deficient or exceptionally irregular in their action; so that there is constant room in education for a motive so direct and so susceptible of graduation in its force as that which consists in the expression of a superior will. Where an external motive is needed, this one will, in the general case, suffice, for the child is weak and dependent, and knows that he is so: obedience, therefore, and not resistance, is the law of his being. He may, indeed, be disposed to resist occasionally, from his very volatility, or when prompted by some caprice of temper, but resistance can never become a habit with him, unless the imprudent application of this motive has unsettled his natural instincts.

[1] Dr. Thomas Brown's *Lectures*, lxxxv.

207. Essential Characteristics of this Motive.—The fundamental characteristic of a sound authority is this:—that it is the expression of a principle, and not of personal desire alone on the part of him who utters it; of right, not of might; of moral, not of physical, power.—(1.) To give this aspect to his authority, the teacher must, in his own relations with his pupils, accustom them to the difference between *law* and personal *desire*, by showing that he is bound by the requirements of law equally with themselves. He should not act as if he himself were the law, and as if he were free to observe or dispense with law at convenience: he should not be capriciously absolute, even when acting rightly: he should not only be right, but appear to be so. Thus, if he inculcate honesty, and yet openly appropriate to himself something belonging to some pupil unknown; if he inculcate punctuality, but allow himself to be tempted to prolong his lessons occasionally beyond the hour understood to belong to them; he in effect teaches that honesty and punctuality are not matters of principle and of absolute obligation, but of personal convenience. The laws which he lays down for the school, therefore, he should extend to himself. In those which are of moral import, he should require from himself an obedience as absolute as he requires from them. To regulations for school business, which are not in themselves of moral import, and which he himself enacts according to to his own judgment, though it is not to be supposed that he is either obliged, or that his engagements will allow him, to give that absolute obedience which he requires from his pupils, he should nevertheless conform, as to laws, unless he have some special and valid reason for acting differently. Such a course, so far from diminishing, will strengthen his authority. The fullest obedience rendered to the teacher on personal grounds is not the obedience which education seeks to implant: that depends on the teacher's personal presence, and the pupil may not feel that the obligation of obedience rests on him when he goes forth from the school to the business of life. Whatever devotion, therefore, the teacher acquires from the pupil by his personal ascendency, he should direct towards the law of which in school he is only the minister.—(2.) The obedience to principle, which the teacher aims at securing, must be an intelligent obedience. This cannot be so in the pupil's early years, during which his intelligence is far too

weak to be the measure of his duty. Accordingly, at this time the teacher must not be over-anxious to appeal to intelligence for the sanction of what he enjoins : this is to peril the performance of duty on the success of his explanation, and the chances of success are all against him. He is not to expect a rational obedience at first, therefore ; yet he is to exact obedience none the less. He cannot suspend the pupil's moral training on account of his imperfect mental development. But as education progresses, and the pupil's mind opens more and more to the reasons of morality, the teacher's duty is to foster, not obedience simply, but intelligent obedience ; so that the reason and conscience of the pupil may be enlisted as sanctions of law. To this the whole course of the school-instruction in morality may contribute ; and the teacher's practical administration of discipline still more powerfully, by appealing intelligently to law when he appeals at all, as he must be constantly doing, by not only quoting it when a breach occurs, but by pointing out, according as he sees his pupils can bear, the grounds on which obedience is an obligation.

208. Firmness in its Exercise.—The exercise of authority should be marked by firmness, kindness, and prudence :—

As the principles of which the teacher's authority is the expression require an entire and unhesitating obedience from the pupil, so they call for a resolute and unquestionable enforcement of it by himself. The vigorous exercise of authority does not necessarily imply harshness or even unpleasantness ; on the contrary, children feel confidence, and in the same degree comfort, when the duties of all are clearly defined and their regular performance unswervingly exacted. To obtain the uniformity of obedience due to principles of conduct, authority must be uniform and steady in its exercise : yielding neither to the weaknesses nor the importunities of pupils ; not exhibiting itself by fits and starts, compensating for occasional indulgence by subsequent increased rigour ; but invariably manifesting itself in the way in which the pupil has been taught to expect. Obedience being due from all alike, the exercise of authority should be impartial, giving no license to the exemplary pupil on account of his good qualities which it denies to the careless or forward : nothing more mars the natural influence of authority than the exhibition of favouritism. Since the offences committed in a school should be viewed as committed,

not against the teacher as an individual, but as against the law which he administers, the exercise of authority should not be accompanied by any symptoms of personal irritation.

209. Kindness.— It is quite possible by the exhibition of firmness and energy alone to have children so much under control, that they shall be diligent and regular in their work, and shall refrain from doing what may offend the teacher. The object of discipline, however, is not merely to impose our will, but to obtain their own assent to the principles which should regulate their conduct. This cannot be enforced; it can only be won. The price which the teacher must pay for their co-operation is that he sincerely cherish, and plainly exhibit, a spirit of good-will and regard for those whom he governs. Where they are not conscious of this, they may indeed be restrained from violating his precepts in his presence, but only to disregard them in their free moments: they will be glad to escape from his authority: nor will they carry away a single impulse to duty from one who, in seeking for their obedience, has overlooked all the considerations which commend it to the conscience of those who are to render it, or which give to it any value when it is rendered. Besides the necessity which exists for this good-will to dispose them to be guided by his authority, it is no less needed to give him an adequate knowledge of his pupils. The effective administration of discipline requires not only an acquaintance with the duties which should be enjoined and the motives by which human nature is actuated, but a knowledge of the character of those who are to be governed: without this the teacher must be ignorant of the defects to be remedied or the motives which have force in particular cases. Motives which influence some pupils may have no effect on others: discrimination is required to apply them. Children will conceal, as far as they can, their real purposes and acts from one in whose intentions towards them they have no confidence, as every display of these will be felt by them as putting themselves more and more at his mercy; whereas they will exhibit themselves without reserve before one in whom they trust. The teacher should therefore cultivate good relations with his pupils, by the kindly and sympathizing tone in which he addesses his instructions to them, and in which he conducts the whole of the intercourse that naturally exists between him and them: not confining his concern

to the special duties of school—for that may not appear to them quite disinterested—but extending it to those recreations which are incidental to school-work, in the encouragement of which his motives are not open to suspicion. And he should be careful not to interfere with this state of relations by the manner in which he exercises his authority over them : expressing his will to them in an open and generous spirit, not hastily and bitterly reproaching them where offence may not have been intended, not indulging in a gloomy and morose temper even when offence has been committed, not cherishing the suspicion that they are continually bent on resisting him, but on the contrary assuming that they are disposed to regard his will till he has had explicit proof of the contrary, and giving them full credit for the obedience they render. Necessary as this mutual good-will is at all times to the teacher's influence, it is particularly so to make it felt when he enters on a new charge or when new pupils enter school. The teacher should arrange for their introduction to the school-society, and by little special attentions endeavour to make their first impressions of the school and its head as favourable as possible. Confidence is to be gained at the outset by friendliness, and not by affected sharpness or dignity of manner ; where it is thus conciliated, many subsequent difficulties which would otherwise arise will be avoided. It may be added, that a kindly spirit is so far from being at variance with firmness, that it is this which lends the charm which children universally come to find in a vigorous government.

210. Prudence.—With firmness and kindness must be conjoined prudence in the exercise of authority, so that its requirements may be adapted to the nature and capacity of children. The earlier it is exercised the greater are its prospects of success : obstinacy, selfishness, and caprice being the natural consequence of indulgence in early years.—It must be fair and reasonable in its expectations and exactions. Silently to set up a standard of perfection, and without notice to punish severely all shortcomings, is at once absurd and tyrannical : it will create a feeling of injustice, and provoke the spirit of resistance. It is a good thing to show confidence in the school—in the sense of expecting obedience to rational and practical and clearly apprehended rules ; but the course described rather throws temptations

in the pupil's way. The exactions of authority, moreover, must not only be proportioned to the pupils' power of obedience, but all reasonable facilities should be given for compliance with them. Disobedience often occurs, because obedience is difficult or impossible in the circumstances: the teacher should not be so unjust to attribute to his pupils blame which is due to his own multiplied or ambiguous precepts, imperfect explanations, or faulty arrangements. Let him do his utmost to prevent faults before he thinks of punishing them.—Authority should be patient, not expecting great results by a single effort: obedience is a habit only to be formed by its long-continued and judicious exercise. This caution is particularly needed in the case of children who are obstinate, either by defect of temper or by defect of previous education. The worst results may be apprehended from dealing in sudden strokes: so that the teacher should consider well the probabilities of the case before resorting to them.—Instead of expending itself on a multitude of trifling occasions, authority should husband itself for such as are important: when these occur, it should carry its point against every obstacle. If these *representative* faults are properly dealt with, those which are trifling will disappear along with them: by the one course, the teacher will make an impression of his authority; by the other, he is only likely to occasion irritation, under which state of feeling his object will, at the best, be imperfectly gained.—Authority should express itself in a manner becoming the consciousness of power. The tones of the voice, the gesture, the look, even the silence of the teacher, may carry power with them. Its language should be calm; free from indefinite hints and overstrained threatenings, which, not being realized, or indeed intended to be so, only reveal its weakness. And it should not be given to speak of itself too frequently.—The teacher must be prepared to relax his exercise of direct authority over his pupils as they advance; not in the sense that he is to tolerate license on their part, but that he must depend on higher motives to influence them. He who comprehends the object of moral education will not only not think this derogatory to his position, but will rejoice when he feels himself free to make the change. His influence is not diminished; it is only exercised through higher channels. It is as ill-founded in reason as it is disastrous in result to humour children when young

with the purpose of afterwards resorting to severity of discipline : they will acquire in this way neither reverence for authority nor self-control. On the contrary, they should be dealt with firmly in youth to accustom them to obedience ; they will then appreciate the relaxation of authority subsequently made in favour of their advancing power of self-government, and will continue to yield to moral influence what they were formerly obliged to yield to superior power. "Methinks," says Locke, "they mightily mistake the treatment due to their children, who are indulgent and familiar when they are little, but severe to them and keep them at a distance when they are grown up : for liberty and indulgence can do no good to children ; their want of judgment makes them stand in need of restraint and discipline ; and, on the contrary, imperiousness and severity is but an ill way of treating men who have reason of their own to guide them."[1]

OPINION OF THE SCHOOL.

211. Power of Public Opinion.—The force of this motive is acknowledged in all communities, large or small, public or private. Each member reverences the common judgment upon his conduct, and feels its approval to be a very satisfying reward, its condemnation to be an intolerable censure. The child's community is no exception to this rule. It too has its schemes, its actors, and its spectators ; with its public opinion as distinctly pronounced, and as influential as in any community whatever. No child can stand isolated from his comrades ; there is almost nothing he will not attempt to gain their approbation, and he sinks abashed within himself when the common finger points to him with disapproval. Such is the strength of his social instincts. The power of this opinion in school is boundless. It is perhaps a stronger instinct which impels him to look for his example and rule of conduct to those who are just older than himself, than that which fixes his attention on the master. For he is associated with them, and is destined to go through the same experience ; and he is curious therefore to learn it from those who have already acquired it. Besides, they can give very tangible effect to their opinions

[1] Locke, sects. 41-43.

of him : if their power is absolutely less than that of the master, they have constant opportunities of bringing it to bear directly upon him. In every school this public opinion is the channel of influence which more immediately determines its character. If there be none, and if therefore the school be broken up into cliques and sections each with an opinion of its own, the pupil is, as it were, carried hither and thither by opposing currents, which disturb the teacher's influence. If there be a public opinion, but not acting on the side of right, the opposition of the two influences keeps the pupil's character in suspense, and makes him unhappy ; it is when there is harmony between them that the circumstances of the school are most favourable for moulding character. In all cases where a school has been markedly successful in its moral discipline, whilst the result is of course ultimately due to the teacher's influence, we shall find him exercising it in conjunction with, and very largely through, the opinion of the school.

212. **Development of School-Opinion.**—If the teacher does not find a healthy public opinion existing in his school—and he will not find it unless it has been expressly cultivated—he should set about creating it ; with which view his course is plain. He is the centre of the little community : it is around his opinion that the public opinion must be formed. He should seek to unite the pupils in their regard for what is good, by drawing them all towards himself in feelings of personal regard ; this will make them glad to look up to him as the source of opinion. When he shows himself earnest in this, the good pupils in the school will immediately respond to him : the others, if they resist at first, will soon come to acknowledge the new power, if not by acquiescence, at least by silence, and their number will gradually decrease. To confirm this concentration of opinion round his own, he must depend on the manner of his teaching, the spirit in which he exercises his authority, and the example which he sets before the school. On the other hand, his special effort should be to gain the aid of such pupils as have much personal influence over their comrades : if he can enlist on his side those who are of decided character, whether by open manly appeal to them in public or private, or by doing something which convinces them of his good intentions towards them, or by devolving upon them some congenial responsibility which appeals to their sense of honour, their influence will greatly assist

him in giving tone to the opinion of the school. If there be any one whom, with all his efforts, he cannot draw over to his side, he must consider the expediency of getting quit of this obstacle to his influence.

213. The Mode of Applying this Motive.—The opinion of the school becomes a source of influence, when it is appealed to to pass judgment on particular actions, in which it is interested. The effect of this is both direct and reflex : direct, in respect of the influence which the verdict has upon the pupil who has performed the act in question ; reflex, in respect that every sound exercise of the moral judgment strengthens its power and discernment in those who exercise it. But just as in working with a vast machine an apparently small force is adequate to the production of great results, so must this engine of influence in school be managed with discretion, lest it crush instead of reforming the offender. It is the action, rather than the person, on which its momentum should be directed. The skilful teacher ought therefore to contrive so as to bring the action prominently into view, while he keeps the performer in the back-ground, his object in this course being to regulate conduct, and not to administer personal reproof : for this purpose he will generally advert to it in an incidental way, so that he cannot be suspected of personal reference ; whilst, nevertheless, the conscience of the offender will feel more acutely the power of the judgment passed on him, because of its seeming to be incidental. No good effect, but the opposite, can result to any one when such an appeal is made immediately after a fault has been committed, and before the excitement has subsided ; the teacher may then be not unfairly suspected by all of taking this course merely to help him in gaining a victory over one of their number. In all cases which the teacher betakes himself to this tribunal of opinion, he must be very sure that the sympathies of the class will go with him : if he violates good sense in his exercise of authority, the public opinion he has himself formed will spontaneously condemn him, that is, if he deals with the case fairly and generously ; whilst, if he does not, he is directly doing what he can to destroy this means of influence altogether, by confounding the opinion of his school. Thus this practice can only be carried out where the teacher has a high ideal of the objects and the instrument of discipline. It is of course not every fault that

is to be carried before this tribunal: there must always remain abundant room for public or private admonition addressed to individuals. The object of this resort by the teacher should be, that under cover of a particular fault he may exercise a general influence on the class. Suppose, *e.g.*, the habit of offensive nicknaming prevails in the school: he selects a particular case of this, and in the way already described he brings it under the notice of the class. It shows the existence of a bad, or at least of an imperfectly enlightened, spirit: he presents the case to them in its true light, as a breach of the law of kindness which should characterize the mutual relations of the pupils, bringing home vividly to them the importance of observing such a law: he not merely obtains a condemnation of the particular fault which will act as a restraint upon its repetition, but he may expect to have exercised upon them a certain general influence by the positive impulse he has given them to obey the law of kindness, which will act so as to restrain not this one offence alone, but all transgressions of that law. It is the highest result of discipline to remove or mitigate a whole class of faults at a time, by imparting one positive and general stimulus to some virtue: this secures an enlightened co-operation and gives the means and the motive to self-control, instead of a single result by the imposing of a single restraint. This is moral education in the best sense of the word: and, because it admits of this comprehensive action, should the teacher's management of school-opinion be so much esteemed as one of his instruments of government.[1]

EMULATION.

214. Emulation.—Emulation, or the desire of superiority, is another of those natural principles which stimulate exertion; ranking with the love of activity and the desire of power amongst the manifestations of self-love, whose general aim is to elevate our position and influence in society. Its operation is not confined to a special class or to special circumstances, but is felt through all communities, irrespective of rank, age, or peculiar occupation. Nor is it dependent on any particular standard of excellence: the man of eminent gifts and attainments finds not more pleasure in vindicating his superiority over his rival, than the man of moderate

[1] Abbott's *Teacher*, chap. iv.; Arnold's *Life*, chap. iii

endowments in doing so over his. We cannot doubt that to it is due in no small degree much of the laborious exertion by which human knowledge and skill are extended: whether crowned by the noble results attainable only by the few who are conspicuous by their genius, or exhibited in the efforts made by the many to improve their talents in the hope of humbler distinction. Not as an independent and exclusive motive indeed, but in conjunction with others; and, in its position of subordination, we shall find no reason to look on this desire of excelling those who are pursuing similar lines of occupation with ourselves, otherwise than as a strong and necessary support to that higher motive which prompts us to aim at excellence for its own sake. Amongst children the power of emulation is not less marked than among adults: so that it has always played an important part amongst the motives employed in their education.

215. Grounds of Appealing to this Motive.—The propriety of appealing to this motive has been much and keenly disputed: some representing it as the mainspring of school-boy action, and as indispensable to the success of instruction; others rejecting it, not merely as unnecessary, but as immoral in its effects from the bad feelings which it calls forth. In forming a judgment, we shall fall into confusion if we do not carefully distinguish between the motive itself and the modes of its exhibition.

It is indisputable that the motive itself exists in the human breast. From which it follows at once that the duty of the educator is not to ignore or extirpate it, but to recognise and regulate it. "Emulation," says Willm, "exists as a natural disposition in every assembly of men pursuing simultaneously the same occupation: it exists independently of all outward rewards or excitement, and has nothing in common with the hope of material advantage, or the fear of chastisement; it excites us to excel each other; to do better, or, at least, as well as our companions. If this disposition is not manifested, something must have strangely altered nature: the sentiment of human dignity cannot have been awakened, or must have been stifled in the heart; and, what is scarcely possible, along with honour, the very germs of vanity and self-love must have been destroyed. Emulation is a generous ardour which nature herself kindles and nourishes. There may be minds so indolent, so unhappy, as never to have warmly felt

its influence. There may be whole schools in which, thanks to bad organization, the indifference of the master, or other circumstances, emulation is only weakly manifested ; but in the school, as elsewhere, it exists naturally, and there is less need of exciting it than of directing it aright."

216. Dangers incident to its Operation.—But all the higher feelings of our nature merge by imperceptible degrees into the lower, and so this principle of emulation may easily be abused. In the hands of an ardent teacher, who thinks more of exacting prescribed tasks than of forming his pupils to good intellectual and moral habits, and who whets the love of distinction by stimulating words and the glitter of artificial rewards, the motive of emulation may change its character, the means may be transformed into the end. The work of the school may become a battle-field, on which the rival combatants think of nothing but how they may vindicate their superiority. In such a strife the mind of each pupil engaged will naturally concentrate its efforts as against a rival : will come to view him as an obstacle to its own schemes : will cherish malevolent feelings towards him ; and may even meditate unfair ways of obtaining the advantage over him. Nor is this all. Amidst this excitement on the part of the brilliant few, there are likely to be some—constitutionally or otherwise unfitted to take part in such a contest—who become the victims of its injustice. Their habits of mind or their temper lead them to shrink from the ordeal ; they are accordingly thrown into the shade, and have to bear often most unjustly the discredit which belongs to the careless or the trifling. All this is matter of experience ; and, were it unavoidable, would lead us to condemn the use of this motive. But these results are not of necessary existence ; they are traceable to the reprehensible spirit in which the motive is misdirected. There may be interests in life into which emulation cannot be introduced without danger ; but there is nothing in the nature of school-engagements to touch the young mind so tenderly as to make any appeal to this principle the certain source of evil passions.

217. Regulation of the Motive.—The bad element which is apt to discover itself in emulation is to be suppressed by the presence of a more powerful element of an opposite kind in the discipline of the school. The bitterness of feeling which might spring up

among the pupils is to be excluded by the feelings of regard which all in common bear to the teacher, and through him to each other. Where he has acquired a personal ascendency in virtue of the generosity and justice of his character, and the kindness and firmness which mark his intercourse with them, and where he has established a sound and active school-opinion, he may apply the stimulus of emulation with vigour, and yet keep it completely in check. Only in such circumstances is the working of this motive safe : then alone are secured the conditions in which the co-existence of an honourable rivalry with genuine friendliness—a co-existence certainly conceivable—is really attainable. Much prudence is required to secure these conditions ; so that the working of this motive in its most favourable aspect is not very frequently seen.

In making its effects dependent on the character of the teacher, we are only dealing with it as we have dealt with the other motives which have been named : for all of them are dependent for their effect on that character. The principle of emulation is in its operation just what we make it ; generous, if guided by a generous mind ; self-seeking and contentious, when under direction of a mean and narrow spirit. Where, again, it is wielded in the mere spirit of routine, and without reflection on what it is and what it can do, it is thrown very much into the hands of the pupils themselves, and becomes what they make it ; its tendency in these circumstances being of course to degenerate. But, speaking of it as a principle consciously directed by the enlightened teacher, it is a power in the school capable of attaining great results without injury to the moral feelings of those who are stimulated by it. Of this fact there is no want of experience in the history of school-education.

There is no ground for confining the application of this principle so exclusively as we do to the work of instruction. It is true that in school intellectual occupation is the chief work of the pupil, and that therefore to it there must be the most frequent occasion of applying the principle. Nevertheless the teacher is supposed to have in view the moral training of his pupils whilst conducting their instruction ; and if he is only impressed with a due sense of its paramount importance, he will find many opportunities of directing their attention to acts of virtue performed

under their observation, and of exciting a spirit of emulation in this sphere of the same active kind as that by which he helps forward their intellectual work. The application of this principle to moral actions ought to vindicate it against the indiscriminate condemnation with which we may be tempted to visit it, when we think only of its extreme exhibition in the acquisition of knowledge.

PRAISE AND CENSURE.

218. Love of Praise.—The desire of esteem is a very active principle in regulating human conduct. The prospect of attaining a name of which all will speak well is capable of maintaining a man through self-denying labour for a life-time: it can overcome even the strongest of his instincts, the love of life itself. Its influence is recognised by all ranks and conditions of men: it animates the dweller in a village or hamlet, and the member of an obscure society, as much as it does the man who strives for immortality in the wide theatre of the world's affairs. Children are accessible to the stimulus of this principle as well as their elders: the object of their life, in truth, at this period is to attain influence and power, and they are therefore keenly sensitive to the praise or the censure they may receive, as it is a standard by which they measure for themselves the degree of success with which they are attaining this object.

219. Dangers incident to this Motive.—The desire of praise is a motive whose results depend on the way in which it is employed: in itself it may be a stimulus to evil as well as to good. We cannot help desiring the good opinion of those on whom we depend: whosoever, therefore, is thrown into a society where character is degraded by the indulgence of low and sensual desires, is under strong temptation to learn to sympathize with that character, that he may gain the good opinion of those with whom he associates. But further, the result of this motive depends on the judgment as well as the character of him who uses it. Praise is grateful to every one, and the appetite for it grows with alarming rapidity. A pupil is therefore apt, when he is much accustomed to praise, to lose sight of the excellence for which he at first received it, and to set up in its stead the praise as the object of his efforts. Thus vanity is fostered: a feeling which should ap-

parently lead to improvement, but which leads strongly in the contrary direction, since it blinds us to our defects by the glare of imaginary excellencies, and banishes that humility which is the only guarantee for docility. It is not merely the bestowing of praise undeservedly that cherishes this weakness of character: the bestowing of too constant praise even for what is praiseworthy may be just as effectual. To guard against these two misdirections of this motive, the teacher must consider well the example he sets his pupils, lest it should mislead any in the hope of attaining his approbation; and he must exercise prudence in distributing this reward to those who deserve it, lest he deprave their character by implanting exaggerated opinions of what they have done and what they can do. Observing these two conditions, he will find the motive most serviceable for the purposes of the school; and by showing his pupils what they should value good opinion for, and whose good opinion they should value, he will educate the motive itself, so as to be a powerful stimulus to good and preservative from evil in their future lives.

220. Conditions of its Effective Use.—The desire of praise is, in its proper place, a very commendable feeling. Next in character to the inward satisfaction which the conscience finds in the performance of duty, we may place that which it derives from the favourable opinion of those for whose character we entertain sincere regard. It is so powerful a reward that it alone serves most of the purposes for which rewards are needed in school: and since in bestowing it we need only compare each pupil with himself at different times, it has this advantage above them, that the teacher may apply it to all aspects of conduct in the exact measure of their deserts. He should therefore regard the judicious use of praise as amongst his most important means of discipline. A sense of duty should prompt him to do so no less than of interest. It is most discouraging to a pupil to find that his utmost exertions fail to extort one word of acknowledgment from his unconcerned teacher; who accepts all that he can do as nothing more than what is due; who is ready, it may be, to censure or punish when he comes short in his duty, but seems to be unconscious of the merit shown in the zeal or self-denial which leads him to do more than is actually required. "Such is the tone and manner of some

teachers," says Abbott, "that they never appear to be more than merely satisfied. When the scholars do right, nothing is said about it. The teacher seems to consider that a matter of course. It does not seem to interest or please him at all. Nothing rouses him but their misconduct, and that only excites him to anger and frowns. In such a case there can of course be no stimulus to effort on the part of the pupils but the cold and heartless stimulus of fear. Now it is wrong for the teacher to expect that things will go right in his school as a matter of course. All that he can expect as a matter of course is, that things should go on as well as they do ordinarily in schools, with the ordinary amount of idleness, the ordinary amount of misconduct. This is what he should expect and let his pupils know that he expects; and then, all he can gain which will be better than this, should be a source of positive pleasure; a pleasure which his pupils have procured for him, and which, consequently, they should share." Supposing the teacher convinced of the propriety of his using this motive, the following considerations are important for his guidance :—

All may deserve praise: it must be a rare case in a school where there is a single pupil who is entirely devoid of merit. In the learning of lessons, the abilities of some will always enable them to outstrip others; but they may not on that account be more deserving. If a pupil diligently uses the abilities he has, he deserves praise when tried by the standard of duty applicable in his case: and he should not be deprived of it because there are others in his class who, it may be from no merit of theirs, attain results which eclipse any he can reach. Then, as to conduct, there are some pupils in every class who are more given to trifling or mischief than others, and who may justly come in for more than the average share of blame. But it is bad policy in the teacher to set them down for ever as of suspected character, to make up his mind that they will do no good, and can therefore never deserve his approbation. There are sober earnest moments in the career of every one when he does something or refrains from something, of which the doing or the not-doing is praiseworthy: critical moments, we should note well, in which the giving or the withholding of the merited praise may have a most important influence on his character. Instead of steadily maintaining a sullen

humour, let the teacher bestow the praise to which, it may be, the recipient is but little accustomed; and he will not always be disappointed; nay, he will often be surprised at the result. If he gains nothing else, he at least gains this, that he has exhibited his disposition to deal justly and generously towards all, without exception; which seldom fails of effect in the end.

The stimulus of praise should be administered steadily; neither omitted when it is deserved, nor thrown away where it is not. None but those who have narrowly watched the motives of children know how much the approbation of a respected teacher is secretly toiled for, and how keen is the disappointment when the approbation so earnestly desired, and, it may be, so fairly earned, is withheld. The connexion which the pupil has formed in his mind between well-doing and its natural reward receives a shock, which may act very unfavourably on his future efforts. Even a single instance of oversight may have long-standing effects, since he does not allow for oversight in the teacher's procedure. On the other hand, if the teacher wishes his approbation to retain its power as a stimulus, he must bestow it only where it is deserved. If he bestow on ordinary diligence or good conduct the commendation he may have bestowed on an extraordinary display of these qualities, he thereby lowers its value; and he should be glad if his want of discrimination does not arouse amongst his pupils discontent and suspicion of his impartiality.

It is unnecessary to remark that praise is due to the exhibition of good moral, as well as mental, qualities. The teacher must praise good conduct as markedly as he praises good answering in the course of lessons: otherwise he conveys the impression that he values the one less than the other. Moreover, he must not confound good conduct with good answering, by conveying his praise of a good answer in such terms as to convey the impression that the giver has performed a good action.

The bad effects of excessive praise in the case of individual pupils has already been noticed. Still more deserving of reprobation is the habit sometimes indulged in of weakly bestowing praise from some interested motive, where it is known not to be deserved. Over-praise leads to vanity: flattery will, in addition, deceive the pupil to the ruin of all his efforts; whilst both may also place the recipient in a painfully false relation to his comrades.

The teacher must employ praise so as to heighten, and not so as to lower, the pupil's idea of duty. It is contrary to the very idea of duty to suppose that every discharge of it deserves praise. We do not praise a pupil for answering ordinary questions correctly; or for being regular on such and such a day; or for showing common honesty in his intercourse with his comrades; or for speaking the truth in the routine matters of school-life. We exact such knowledge and conduct from him; we should punish him if he did not exhibit them. Praise is not due, and should not be given, to acts for the neglect of which punishment would be incurred. We should reserve our praise for acts which are above the average standard of duty recognised in the school. Thus we should praise a pupil for an answer which shows thoughtfulness; for a long continued course of punctuality; for the honesty exhibited in his delivering up to the teacher any property which he may have found when by himself; for the courage and self-denial manifested in speaking the truth to his own loss. If the teacher hold his praise cheap, and bestow it where there is no real merit, he weakens both the pupil's sense of duty and the power of this motive itself.

It is not necessary to the good effects of praise that it should be conveyed in a formal or ostentatious manner. There are critical occasions when this may be advisable, as where a pupil has done something which shows an advance in his perception of duty, or when he has conquered some habit for which he was notorious. It is the character of him who bestows it that gives praise its weight: in the general case, a single word of commendation, uttered as it were incidentally, by one who is respected and loved, will amply attain the end in view. There are many occasions where the teacher may advantageously express his approbation of pupils in private, to confirm the result which he anticipates from the praise he has given in public.

221. **Fear of Censure.**—To censure is a less pleasant, but not less necessary, part of the teacher's duty than to praise. Some rest in the theory that by advice and by coaxing (which is just praise given beforehand, and therefore a very bad form of praise) children may be persuaded into the performance of their duty; and others of easy nature find it so distasteful to indulge in reproof that they do not use this means of discipline at all. Neither

the theory of the one nor the practice of the other can be justified: they inevitably lead to too lenient a view of the faults which in point of fact every one commits, and so sacrifice the pupil's character for present convenience or comfort. Offences will happen: the faithful and judicious use of censure will keep them from multiplying in number and increasing in heinousness. Censure shares the advantage that attaches to praise, that it may be administered so as exactly to suit the various offences. And all degrees of it, from the simple look of dissatisfaction or the gentle remonstrance up to the stern expression of indignation, find their appropriate place in school-government. Anger is not an immoral feeling, though the abuse of it is, whether in degree, frequency, or kind: on the contrary, directed as we suppose it to be, against the pupil's faults, and not against his person, the expression of it may be due no less to his welfare than to the character of both teacher and school. He who cannot be angry when occasion requires, is deficient either in sensibility or in courage; or he is too indolent to be intrusted with the education of youth.

222. Conditions of its Effective Use.—The use of censure should be guided by considerations corresponding to those which regulate the use of praise.

As there are none who do not sometimes deserve praise, so there are none who do not sometimes deserve blame. The teacher must beware of supposing that good general character supersedes the necessity for occasional censure. If there are critical moments in the career of the careless pupil when deserved praise may win him from some evil habit, there are no less such moments in the career of the good pupil when deserved censure must be firmly bestowed to save his character or temper from injury.

But the administering of reproof must not be allowed to degenerate into a habit of fault-finding. This is so far from being the mark of a high state of discipline, that it rather indicates in the teacher a defect of temper or a want of discretion incompatible with its existence. Fault-finding keeps alive in a school a feeling of uneasiness and irritation, and is certain to increase the evil which it aims at reproving. The policy to be pursued by the teacher to check the perpetual occurrence of trifling faults has already been explained. (§ 210.)

As praise cannot be effectively used by any one who overlooks

the necessity for occasional censure, so neither does censure carry its just influence in a school where the teacher does not bestow praise when it is deserved. Even children cannot but feel that they do not always act so as to deserve censure, but that they sometimes deserve praise. Where the teacher does not recognise this fact, they must cease to place confidence in his disposition towards them; on the other hand, deserved censure comes with tenfold power from one whom they know from experience to be ready to give them all the praise they deserve.

The effective use of censure does not depend on the use of many and angry words. There are, doubtless, occasions when it is expedient to administer it in a formal and demonstrative way; but in the general case the end is best attained by brief and pointed, yet, as it were, incidental expression. Censure derives its influence from the character of him who gives it: where this is venerated, a single word or even look will produce an impression to which the set discourse of another may in vain pretend.

The expression of censure should not be uttered with such asperity of tone as to lead the pupil to believe that the teacher is acting from personal motives rather than merely as a minister of the law, and that he is likely to bear a grudge against him for the future. A chronic sullenness of bearing is most discouraging and unjust: by all means let there be sharpness in the censure when it is deserved—that of itself will give no offence—but let it pass away with the occasion which calls it forth.

Censure is often most effectively administered in private. Such a course shows the pupil that the teacher does not desire to humiliate him, but on the contrary respects him and is anxious to avoid wounding his self-esteem. The teacher cannot always afford to follow it, because the correction of the fault of a particular pupil may be a matter in which, from the circumstances of its commission, the whole class is specially interested. But in those cases in which it can be adopted without the sacrifice of any interest, it is often attended with the best results: in the case of good pupils, from the clear evidence it gives them of the teacher's regard; in the case of bad pupils, from its depriving them of the sympathy of their fellows on which they always calculate in their resistance to authority.

Ridicule, as a form of censure, is in the general case to be

avoided. It is so even in dealing with adults, who can estimate the spirit in which it is uttered; but in dealing with children who have not this discrimination, the teacher can never calculate what its effects will be. The only certain result is, that he turns the general laugh upon the pupil; whose self-esteem is too sensitive at this age to bear it. Resentment, therefore, rather than conviction, is the consequence. Without denying that there are occasions—as when dealing with matters of personal habit—in which a friendly joke at a pupil's expense may have a good effect, a satirical, sarcastic spirit is a dangerous weapon for a teacher to wield. He can hardly avoid conveying the impression by word or gesture, it may be unconsciously, that he is treating the pupil's feelings lightly; and that impression will destroy the confidence and respect which are essential to his exercise of serious influence.

REWARDS AND PUNISHMENTS.

223. Necessity of Rewards and Punishments.—Rewards and punishments are the natural and necessary sanctions of law. They are not the *object* of obedience to law; but they are the inseparable concomitant, and therefore a strong and legitimate motive, of the obedience. The law of conscience appeals to them: no less does the legislation of all communities whatsoever. There is no dispute as to the abstract propriety of their employment, as there can be no law without them: but there may be diversity of opinion as to their occasions, forms, and degrees. They are indispensable in school. Children require to be urged to the performance of their duty by other considerations than their imperfectly developed sense of right. They must feel that there is pleasure in the performance; for which end they must be stimulated by the hope of reward in some one of its varied forms. But the influence of attraction, great as it is, and pleasant as its exercise is to the teacher, must be supplemented by the power of restraint. From peculiarities in constitution, liability to temptation, and the notorious influence over them of passing humours, children require to feel that the authority which is set over them has restraints, not less than persuasives, of indefinite force.

224. Their Place as Motives.—The first requisite to their proper use is that they be kept in their place of strict subordination

to the higher motives. They may easily be elevated in the estimation of the child, so that he shall regard them as the end of his conduct, and shall therefore look upon what he does simply as a means of gaining the one or escaping the other. He may be attentive to prescribed tasks; he may conform externally to some rule of conduct; nevertheless he may not deserve the credit which seems his due, for the attention or the obedience he renders may only be the means by which he hopes to attain the gratification of some other desire. In similar circumstances, he may be influenced by the fear of some threatened punishment. If such hopes or such fears are continually held out to him, he is not trained to act from the higher motives at all. It is matter of experience that the misuse of these stimulants is common; a result due, on the one hand, to the ease with which they may be administered; and, on the other, to the apparent power with which they attain their immediate object. Indeed, they cannot fail to be misused by all who measure the propriety of expedients in education by their facility of application, and who lose sight of ultimate habits in the attainment of present results. It is difficult to say which is the more degrading, the discipline of bribery, or the discipline of compulsion. (§ 24.)

Rewards and punishments should not be confined to one department of conduct, but held out to all, and in the proportion of their importance. It is therefore improper to associate them so exclusively with class-work, as is commonly done in school. The effect of such an ostentatious patronage of intellectual, and equally ostentatious neglect of moral, effort, must be to give an undue ascendency to the former in the pupil's estimate of character; in fact, to confound goodness with cleverness. A virtuous character being, according to the testimony of the educated conscience, more honourable and more useful than an erudite mind, its elements have the first and strongest claim to be encouraged. Accordingly, habits of attentive, diligent, and regular work, and, much more, habits of good conduct, should be of higher consideration in school than the clever answering of questions or the elaborate performance of particular exercises. Moreover, supposing the proportion to be observed between mental and moral effort, it is essential to the efficient use of rewards and punishments that they be offered, not according to the fancy of

the teacher, but, with discretion, to those points of conduct in which the character of the pupil is deficient, and therefore requires a strong stimulus. Hence the propriety of connecting them with the overcoming of any bad habit, or with the making good, by extraordinary care or diligence, any special disadvantage under which he may labour.

225. Conditions of their Right Use.—It is essential to the just use of rewards and punishments that they regard, not the possession of natural gifts and aptitudes, but the use which is made of these. An act may be performed by one pupil which deserves reward or punishment, whilst the same performed by another deserves neither. Thus, in the matter of relative attainments in knowledge, we observe that one pupil is born with better abilities or to greater educational advantages, than another: he is not entitled to reward because he outstrips his neighbour of inferior understanding or of narrower circumstances; nor is the latter necessarily to be punished because of his short-coming. So in the matter of conduct one may be born with particular moral tendencies, or to high educational advantages; he is not entitled to reward because he performs some particular good action more easily than his neighbour, whose temptation is greater from some moral weakness he inherits, or from the sinister influence of bad example under which his early years may have been passed; nor is the latter to be punished because of his misfortunes. Reward and punishment should be bestowed, not according to what nature has made a pupil, but according to what he has made himself; we should ask, not what talents or what dispositions he has, but how he has applied the one and striven to regulate the other. If we disregard this principle, we shall use the sanctions of law to confound, not to develop, the sense of duty.

The teacher should endeavour to estimate accurately the character of the acts for which reward or punishment is bestowed. He must distinguish good intent from accident or routine; and a mistake from a crime. The merit of an action is not to be measured by the degree in which it falls in with his own humour; nor its demerit by the degree in which it causes him personal inconvenience. From neglect of these considerations, the character of the common actions of school-life is often distorted: in particular, faults are often exaggerated. Besides estimating accurately

the nature of the act, the teacher must accurately discern the disposition of the pupil who is to be rewarded or punished. Different dispositions have different sensibilities: different degrees of reward or punishment may therefore attain the same end in different cases. Thus, one pupil may feel a certain form or degree of punishment to be very severe, which another thinks of little moment. No more should be inflicted in any case than is necessary for the correction of the fault. The teacher has to administer law with an educative purpose, and not in the spirit of a judge who has to consider the effect of example as well as the reformation of the culprit.

Rewards and punishments are important instruments of moral discipline; and their dignity should not be compromised by the mode of their administration. They should not be given too frequently, else they will be looked on as matters of course, and lose their power. They should be carefully graduated in amount to correspond with gradations of merit and demerit: this is required by considerations both of justice and of prudence. Economy in this, as in other things, may make a little go a great way; whereas prodigality on ordinary occasions exhausts the teacher's resources, and drives him on desperate shifts when serious cases arise.—They should not be treated in a light and flippant spirit. As the last motive to which he appeals, punishment is a very serious thing; he should, therefore, not allow himself to trifle with it, nor should he hold it up merely to terrify children. The effects are equally bad, whether a promised punishment be inflicted or not by one who is in the habit of threatening without performing: if he inflicts it, he may be said to betray the pupil into incurring it; if not, he acts falsely, and destroys the pupil's confidence in his sincerity.—Punishment, when habitually inflicted on large numbers at once, almost necessarily fails to command respect; whilst the familiarity which this implies with the lowest motive to action lowers the moral tone of a school. It may be necessary, on rare occasions, to punish a number at the same time; but it ought never to be necessary to punish a whole class, and much less a whole school. A whole class or school will never unite in committing faults, unless they are first depraved by a radically vicious discipline.

Justice, uniformity, and calmness should characterize the administration of rewards and punishments. The merit of a good action

should not be exaggerated to make it appear more worthy of its reward; nor should a fault be misrepresented to cover the infliction of excessive punishment. It is not the alternation of leniency with severity that will secure respect for law; but the attaching of reasonable consequences to actions, and the steady award of what the child has been thus led to expect. If experience tells him that he may be disappointed of his reward, he will not go out of his way to deserve it; if he feels that, through indolence, remissness, or caprice of administration, he has a chance of escaping punishment, this hope will often suffice him for a motive to action. Let the teacher, then, be careful not to keep back the promised reward; his justice will be measured not by his after-explanations of what he may have intended, but by the pupil's expectations; he, and not the pupil, should pay the penalty of his ambiguity. On the other hand, let him not fail to inflict punishment on understood faults; should it appear to him inadequate for its end, let him not suddenly increase it or inflict with irritation because of this conviction: quiet perseverance will often attain success for it; if not, let him announce his intention of modifying it. But the power of law depends on certainty and steadiness of association between act and consequence.

226. Distinction of Natural and Artificial.—There are two classes of rewards and punishments, between which we should draw a distinction, the natural and the artificial. By the former, we understand the pleasures or the inconveniences which naturally arise from actions. Thus the habit of truthfulness on the part of a child leads us to place implicit confidence in his word, and the habit of punctuality leads him to the enjoyment of social pleasures which are planned in dependence on it: on the other hand, falsehood naturally leads to a distrust of the offender's word, and unpunctuality to the loss of anticipated enjoyment, or to the enforced performance at a leisure hour of some task which may have been evaded. Such consequences of actions are their natural rewards or punishments; and hence, in the family-circle, where the educator is in circumstances to choose what is absolutely the best for individual pupils, they chiefly are relied on. In the same class we include praise and censure, which are only the expression in words of the feelings which, in the other case, are expressed

silently and in deeds. The judicious teacher will employ these natural consequences as far as he can; and for this he has abundant opportunity. But he is not confined any more than the parent to these rewards, whilst to rely exclusively on such punishments would be virtually to let many faults go unpunished. From the very constitution of the school he must have recourse to expedients both of reward and punishment, of a more palpable kind, of more certain effect, and yet easily practicable without sacrificing the time which should be given to school-work.—To the consideration of these expedients, artificial so called, because their form does not necessarily spring out of the actions with which they are associated, the sequel of this chapter will be devoted.

227. **Rewards—Order of Merit.**—The artificial rewards best known in schools are two, which are for the most part used to give effect to the principle of emulation, viz., the arrangement of classes in order of merit, and material rewards or 'prizes.'

The changing of 'places' in a class, according to an assumed standard of merit, is not necessary to the working of emulation: this principle may be very active where such an expedient is unknown. But such changing undoubtedly stimulates its activity, from the present and palpable object which it sets up for class-exertion: it requires, therefore, to be conducted with discretion, in order to avoid the dangers incident to the excess of emulation. It has been objected to chiefly on two grounds. First, that it causes interruption to class-work and loss of time; but these ought to be almost inappreciably small, unless the practice be resorted to where the class-benches are made expressly to exclude it. Secondly, that it rewards only verbal or memoriter answers, and thus encourages brilliancy rather than solidity; but, whilst it may be used with this imperfect result, it may equally be used to reward attention and thoughtfulness: in fact, it will be used by different teachers to reward those features of class-appearance which their style of teaching is by itself fitted to secure, smart verbal answers where these are in repute, or careful and thoughtful answers where he has the judgment and professional skill to extract them. Whilst, therefore, the system of changing places is by no means essential to good school-work, it may be, nevertheless, employed as a reward with good effect. It makes a fair approximation to

actual merit; its influence is felt over the whole class, in which respect it has a manifest advantage over 'prizes;' and it places each pupil in honourable rivalry with those of similar standing and ability to himself. Its action is independent of absolute position in the class: it is as satisfactory to the pupil of moderate ability to reach the highest point of what he feels to be his own level in the class, as it is to any of the more brilliant ones to reach the top of the whole class. It admits of being used as a standard by which the diligence and proficiency of each pupil may be not unfairly measured by those who are interested in him: and he recognises this himself.

There are two ways in which it may be carried out. According to the one, the teacher attaches a certain value, according to an understood scale, to the various appearances of each pupil for a given time, as a week, balancing his merits against his defects; and at the end of the week the order of merit is determined for the week ensuing. This mode has several recommendations: it admits of a nearer approximation to actual merit; it diminishes the chance of ill feeling arising among the pupils; and it accustoms them to labour patiently for an object which is not of immediate attainment. But, on the other hand, it requires the teacher to keep accounts (§ 182); which is practicable enough where each teacher has but one class to conduct, but which the pressure of engagements seldom allows the teacher of a common-school to do. The other mode is therefore in more general use: that, namely, which gives the reward of 'place' at the moment when it is deserved. To increase its efficiency, the following considerations should be attended to:—(1.) A real value must attach to 'places' in the estimation of the class: on the one hand, therefore, change should be intelligible and systematic, not arbitrary and occasional; and, on the other, it should not be so frequent and violent as to give the pupils ground for hoping that mere time and chance will restore them without effort to the position they have lost.—(2.) The teacher must promptly and authoritatively determine when 'places' are to be changed; hesitancy may lead to disorder. But a class should soon come to understand the considerations on which 'places' are gained or forfeited; so that there is little danger of there being more than one claimant at a time for a 'place.'

228. Prizes.—The giving of 'Prizes' in schools very inadequately fulfils the conditions of effective reward.—(1.) They are not within reach of all who deserve them; so that their influence is limited. A class very soon comes to see which of its members have the chance of obtaining prizes. On that small number the effect is doubtless strongly stimulant; but the bulk of the class is quite unaffected, by their knowing themselves to be hopelessly shut out from success in the contest. This defect in the system of prizes is still more weighty when we come to speak of conduct as contrasted with attainment. Good conduct should be rewarded; but it is gravely objectionable to single out one or two pupils who are supposed to have most distinguished themselves by their good conduct. Amongst many who have behaved well, it is impossible to say, with certainty, who has behaved best: any standard by which we thus attempt to measure out good conduct with precision must be arbitrary, and is likely to be fallacious. Injustice is done to the many, and a position of very doubtful benefit assigned to the one. If there is not a feeling of injustice, it is only because there is a feeling of indifference engendered by the conviction that the distinction of a good-conduct prize is artificial and not real: which is much to be deprecated in a matter so vitally important.—(2.) The other objection to the system of prizes is that they are given to natural ability rather than to diligence. In practice, the pupils of best ability obtain the prizes as a matter of course; although their application is often manifestly less than that exhibited by their less fortunate, but equally deserving, neighbours. This is unreasonable; and tends to discourage application throughout the class as a whole. These objections to the system can never be removed. Their force is acknowledged by all to whom it ever falls to distribute prizes; and the acknowledgment is felt to be the plain and irrepressible dictate of the merest justice. But they may be mitigated by various expedients. Thus, in addition to the general class-prizes, prizes may be held out for special exercises of different kinds, which call forth different talents. Much more efficacious, however, is the subdivision of the class into groups of pupils of about the same standing; who may therefore with less unfairness compete with each other. For this purpose prizes would require to be more numerous than it

is the custom at present to make them: which, however, they ought to be on any consideration, even though the inherent value of each should be diminished.

229. Certificates.—It is common in schools and colleges for adult pupils to issue a certificate of merit to all who deserve it. Where diligence and good conduct have been exhibited, the full attestation of these is most grateful, altogether apart from the question of relative excellence. It is not only grateful in itself; it is doubly grateful as a passport to the good opinion of the friends, and to advancement in future life. There seems no reason why such a certificate, modified to suit the circumstances of the case, should not be used with good effect to promote diligence and good conduct in the common-school.

Such a document would derive its influence, in the case of all the pupils, but especially of the younger portion of them, from its bringing school-merit directly under cognizance of the parents. It is both the interest and the duty of parents to encourage their children in well-doing; and there can be no reason why well-doing in school-work should be exempted from the general encouragement, except this, that from the want of any understanding with the teacher, they have not the means of bestowing it with sufficient knowledge of their children's deserts. Of necessity they hand over the work of instruction to the teacher, but it is a misfortune for all parties that they should retain so very slender a connexion with it. The most powerful, as well as the most constant, influence that can be brought to bear on the pupil, either for application or for good conduct, is the influence of the family, whether it be exerted in the form of advice, admonition, reward, or punishment; and it could not but be felt by the teacher as the most effective support that can be rendered to his own discipline. Any correspondence between teacher and parent for the purpose of mutual co-operation must not trench unduly on the time or responsibility of either; but it does not seem impossible to avoid such a danger. The distribution of certificates at stated periods, yearly, half-yearly, quarterly, or even at shorter intervals, characterizing explicitly the pupil's progress and conduct, would enable, and even dispose, the parent to commend or reprove, to reward or punish, as seemed to him expedient. Such a correspondence might not be practicable in every grade of society; but it

would be practicable in the general case, and there is little room to doubt that it would be beneficial.

In the case of the elder pupils, whose school career is drawing to a close, and who have the immediate prospect of an entrance on the serious business of life, such a document would carry with it an additional weight of influence from its bearing on their future advancement. They are capable of grasping the connexion between their present acts and consequences comparatively remote; and this connexion should be constantly impressed on them as part of their moral training. They should be accustomed to look forward to that future in which they are to play their part; to meditate on the duty of preparing for it; and to consider whether their present course of conduct is calculated to promote their true interests. The practice of giving certificates on leaving school would tend to keep the future more distinctly in the pupil's view, whilst it could not but invite the teacher to remind the pupil, on suitable opportunities, of his duty to labour, not for present and passing enjoyment, but for future well-being.

A certificate of this nature combines many of the conditions of effective reward. It is open to all deserving pupils; and thus would reach with its influence those who can have no hope of obtaining a prize. It can be so expressed as exactly to bring out the several merits and degrees of merit of the pupils. And, if the teacher use it judiciously, particularly if he can obtain the parent's recognition of it, and instruct his pupils carefully in the doctrine of consequences, it will afford a means of bestowing reward second in power to none.[1]

230. Punishments—Imposition of Tasks.—The punishments commonly relied on in elementary schools are three—impositions, corporal punishment, and expulsion.

The imposition of an exercise to be performed during the pupil's leisure time is a form of punishment applicable to all offences which are incidental to class-work. These are threefold: lateness, inattention, and want of preparation. Their amount is dependent on the character of the school; where it is well conducted, they will be of infrequent occurrence, for the pupils will have no motive to commit them, but the reverse.—(1.) Lateness is a fault often irrationally dealt with. In the case of

[1] *Min. Counc.* 1865-6, pp. 27-29.

the youngest children, it can hardly be considered a fault at all: it is a mere weakness of their nature. And, though its removal may give some trouble for a time, owing to the child's want of any conception of the value of time, it will in course of time disappear if the teacher quietly call their attention to it with sufficient regularity: at the furthest, nothing beyond reproof can be required in their case. With the elder children it is a decided fault; but it is (in ordinary circumstances) so unnatural a fault that the teacher should be very careful in determining how far the pupil is blameworthy. Where the school-work is conducted in a good spirit, and is made fairly interesting, the pupil's desire of occupation, his wish to meet with his companions in work at the appointed hour, and the force of habit, all act to keep down this fault. Where it nevertheless occurs, the teacher will find it in great measure due to defective home arrangements, or to obstacles thrown in the pupil's way by the parents; in which case he should address himself to them as the responsible party. Failing a remedy on their part, justice will not permit him to punish the pupil, who is in reality not to blame. Where lateness is purely the pupil's fault, the teacher should seek to remedy it, in the first instance, by reproof of varied severity. Failing amendment, he should resort to loss of play-hour or an imposition: as a support to which punishment, he will find his advantage in appealing to the influence of the parents. In connexion with lateness may be noticed stealthy absence from school: this offence is natural enough when fear is the ruling motive, and is indeed inevitable under such discipline. Where it is found to be common in a school, the remedy is to elevate the general tone of discipline: but if this be good, and if the work be conducted with fair interest, there will be no occasion to reckon 'truancy' amongst school-faults. We are under no obligation to point out how to cure a fault which is directly traceable to bad management on the part of the teacher.—(2.) Like lateness, inattention is not generally a fault in the case of the youngest children, but a natural weakness which should disappear with the growth of their minds. When exhibited by elder pupils, it is as often the fault of their teacher as their own. Attention depends on the interest of their work and on the degree in which they are kept employed. All

good teaching exhibits these two features, and therefore leaves little room for inattention: with bad teaching or defective arrangement of the classes, there will naturally be inattention; in such circumstances it is the fault of the teacher alone. In so far as inattention is compatible with good teaching, it will be best remedied by the teacher directing his questions more frequently to the quarter where it is exhibited: by way of punishment, admonition and loss of place (where place-taking is practised) are generally sufficient. In exceptional cases of natural frivolousness or mischievous trifling, the pupil should be placed apart and under the eye of the teacher, so that he may have as little temptation as possible.—(3.) Want of preparation is a fault whose amount, equally with that of the faults already mentioned, depends on the character of the school. Where the teacher is interested in his work, and really teaches his class to profit, it will occur only in a very moderate degree. When it does occur, it naturally exposes the defaulter to lose his place in the class: but this is not sufficient penalty. The pupil comes to school under a contract to which his parents are a party that he shall prepare the prescribed work: the teacher's obvious resource, and his duty, is to insist on the fulfilment of this contract. He may fairly require the pupil to make good at his leisure-time the lesson he has neglected, or, where that is not practicable, to perform an equivalent amount of work in another form. This penalty has been much objected to, on the ground that ordinary school-work should not be prescribed as punishment. But this is not ordinary school-work: for the stimulants of intelligence and curiosity which give to that work its life are wanting, and there remains only the constrained labour. The principle of the penalty is just; and the penalty itself, if only inflicted with unbending uniformity, is of a nature which can hardly fail to secure its end. The deprivation of play-time is an intolerable burden: nor is the sacrifice compensated by any public credit resulting from the performance of the task imposed.

On the whole, where the organization is judicious, and the instruction intelligent, a comparatively small margin remains for this class of faults; and the teacher should be able to make it gradually smaller, as he advances in experience and skill. Whether in any circumstances he would be justified in suppress-

ing them by severer punishment is a question that will be answered presently.

231. Right and Expediency of Corporal Punishment.—The punishments which have been mentioned should serve the purposes of correction in the general case; but there will come emergencies in the life of every school, in which, if the teacher's authority is to be maintained at all, recourse must be had to severer measures. Corporal punishment or expulsion must be at hand as a last resort. The difficulty is to ascertain their relative positions and their respective limits. If corporal punishment be thought degrading or illegal, the necessity for using it may be avoided by the expulsion of any pupil who appears insensible to the motives which the teacher conceives himself at liberty to present. But the problem of punishment is not thereby solved; for we wish to know, not whether chastisement can be dispensed with in favour of such an alternative, but whether good discipline requires or admits of such a course. Expulsion may well be regarded as a far more serious penalty, and a frequent recourse to it as a step attended with greater evils than any that are involved in corporal punishment: and it may well be maintained that we ought to try the remedial power of this corrective, before we publicly brand a pupil as one who is unworthy to remain in the society of his fellows.

The first question to be answered with respect to the employment of corporal punishment is one of right,—Is the teacher entitled to use it in any circumstances? The association of bodily pain with wrong-doing, so far from being unnatural as a means of discipline, is manifestly in analogy with the mode in which nature herself deals with children while they are acquiring their first knowledge and experience. But with whom rests the responsibility of making this association? It is not for any one who has the oversight of children to resort to it at his pleasure: the rights of tender childhood must be stringently guarded. The answer is clear: the parent, who is responsible for the existence and upbringing of the child, is responsible also for the discipline employed to forward his education. Nature has given him the strength of affection which is required to make the child's happiness his supreme consideration, and has thus placed the responsibility in safe hands. But this natural right of discipline does not

belong to the teacher in virtue of his office. The parent alone has received it, and it is for the parent to determine whether he shall delegate it or not. The question as to the teacher's right, therefore, resolves itself into this, whether the parent delegates it to him at the same time that he delegates the work of instruction. In delegating the latter, he does not necessarily delegate the former : in some countries he has not done so. In this country, without doubt, he has. Society has sanctioned the teacher's use of corporal punishment. And individual members of society are not entitled, against the general voice, to impose restrictions on the teacher of a common-school ; they may propose, but he is free to decline. The right of this punishment being thus delegated by society to the teacher, he is amenable to public opinion for the use he makes of it ; and he cannot successfully plead the dictates of his own conscience against the convictions of the public conscience.

There remains the more difficult question of the expediency of this punishment. It is urged that the teacher necessarily forfeits the respect and good-will of his pupils by having recourse to it. We think it more reasonable to suppose that the character we suppose him to have established for himself by his justice and kindness will sanction the punishment in the eyes of the school, and even of the offender himself, rather than that the punishment will destroy the character he has established on so good a foundation. It is further urged that corporal punishment is degrading to the pupil. Degrading it doubtless is, insomuch as it must be accompanied by a sense of shame at having deserved it from a teacher who acts towards his pupils in so good a spirit of general discipline ; but not degrading in the sense intended, the sense in which it is degrading to the adult, who, even when deserving punishment of some sort, feels that physical coercion is an unworthy form of it to be applied to a rational being of matured understanding, and who is therefore either broken down in spirit by it, or driven to desperation. The child himself does not feel it so ; and we are not to speak of him, still in the sensuous stage of his being, as if he had the self-consciousness and reflection of a man.[1]

232. **Frequency of its Application.**—In admitting that the

[1] *Quart. Jour. of Education*, Nos. xviii. and xix. ; *English Journal of Education*, 1851. But the subject is discussed in almost every work on education.

action of this punishment will be found salutary in certain cases, we hold that in a good system of discipline it well be altogether a rare and exceptional resort. It may be well to recapitulate the means of influence whose use should make it so :—The general work of the school should be made interesting, by appealing to the pupil's intelligence and engaging his activity. Then the teacher should deal with him generously ; regulate exactions by the power of performance ; manifest a desire to have the pupil on pleasant terms with himself, rather than to catch at his failings and find in them opportunity for censure ; appeal to his better feelings, and rely on them as long as they appear sufficient ; concern himself with his general welfare and happiness ; and when difficulties arise, deal with him openly, justly, and resolutely. He may thus hope to establish for himself a strong personal ascendency over his pupils which will make itself felt to the furthest limits of their duty ; and in his school a healthy public opinion, which will dispose all to be guided by him, to regard not only his regulations, but his wishes, as their law, to covet his approbation as their highest pleasure, and to shrink from his censure as the source of their greatest uneasiness. If, in addition to all this, he set before them a good and consistent example, he has in operation a series of educative influences which will, in the general case, keep the moral machinery of the school in sound and vigorous operation, and which will keep punishment in the subordinate place which belongs in education to corrective stimulants, as the remedy for exceptional or abnormal acts and dispositions. When he has done all this, the minor penalties still stand between him and chastisement. Let him not make up his mind to the use of chastisement as a matter of course, because thousands before him have done so : but let him act on the conviction that other means of influence and restraint are open to him, which, as many have found sufficient for their purpose, he may find sufficient for his. Let him aim at prudence, patience, firmness, and dignity in administering these : prudence, to adapt them in kind and degree to the various offences he has to check ; patience and self-control, to restrain the passion of the moment, and to exhaust the influence of the minor penalties his law allows him ; firmness, to disregard the promptings of partiality on the one hand, and of caprice or humour on the other ; and dignity, which shall banish

from the judgment-seat everything like a flippant and jesting spirit in the serious work of discipline. Let him keep note of his experience in the use of all his influences ; and let him study the character of children that he may gain an insight into their motives. The better he knows them, the firmer will be his hold over them. He may hope to learn the mechanism of the child's action so well, as to obtain almost the complete power of regulating it. He will then be able to retain chastisement as a reserve-force ; which is precisely its position of greatest influence.

Its power is in the inverse ratio to its frequency of application. Where it is employed for every-day acts, it becomes a common thing with a commonplace influence ; and the result of familiarity with this, the lowest of all motives, is to weaken or destroy the force of the higher. He uses it best, who uses it least ; not because, like a servant, he is forbidden to use it, but because, with the dignity of a free agent, reserving the liberty of its use, he has learnt to do without it.

233. **Offences to which it is Applicable.**—It is generally conceded that, where corporal punishment is used at all, it should be used for the correction of offences against morality. And certainly falsehood, dishonesty, impurity of speech, cruelty, and the like, meet their deserts when subjected to the strong check which it involves. Only we assume that there is a clear understanding between teacher and pupils as to the features of temper and conduct to which the penalty is attached. Where there is no law, there is no transgression : justice requires, therefore, that the law be clearly promulgated, whether in the course of general moral instruction, or in the form of specific and intelligible enactment, before the violation of the law can be reckoned punishable. Where this has been done, and where there is no room for misunderstanding, the punishment should be at once inflicted, without the weakening incumbrance of further explanation or remonstrance. But is corporal punishment to be confined to offences of this sort ? Offences against school-work, such as have been adverted to above, do, when pushed to extreme, become, if not offences against morality, at least offences in which there is an element of moral delinquency. They resolve themselves into acts of disobedience. We would certainly not suggest corporal punishment as the ordinary restraint upon lateness, inattention, and the

like ; but it would not be inaptly applied in the exceptional case of a pupil wayward enough to absent himself repeatedly from school without reason assigned, or of one who seemed ambitious to acquire the character of a mischief-maker during school-hours. Thus it is not so much to any particular *kind* of offence that it should be applied, as to a particular *degree*. But the teacher should exercise discrimination in estimating the acts and tempers of his pupils with a view to punishment, so that he may have a reasonable confidence that it is viciousness he is dealing with, and not merely dulness, natural defect, or some disadvantage incident to their home-life.

234. Its Limits.—One limit to corporal punishment is obviously suggested by the obligation under which the teacher lies to preserve the bodily well-being of his charge. Weak health, in any of its forms, should be sacred from the touch of the rod ; but a pupil in vigorous health may be injured by rashness and indiscretion in the mode of applying chastisement. The teacher who sees occasion to use it should confine himself to stripes on the hand, discarding every instrument but the leathern 'taws.' Indiscriminate beating of the person can hardly fail to lead to injury in some cases, and still more frequently to the appearance of injury : in both of which eventualities he exposes himself, beyond hope of satisfactory defence, to public reprobation, if not to legal penalty. It is not for the schoolmaster to complain of being subjected to the same responsibility as the law of the land and public opinion have imposed on the parent himself.

The limit which it is most difficult for him to perceive clearly, is the degree in which he should persevere with this punishment in particular cases. We do not refer to the calm and steady repetition of a moderate infliction, as often as the offence requiring it is committed by a pupil whose bodily and mental vigour exclude all thoughts of danger, but to those cases in which he is tempted, by the apparent failure of his correction, to increase it in proportion to what he deems the pupil's obstinacy. Under this temptation he is insensibly drawn into a contest which every consideration of his dignity and his usefulness should lead him to decline. It is at once needless and ineffectual ; for if chastisement does not produce the desired result when administered in reasonable measure, the fact is a sufficient indication that it is not

the remedy to be relied on in the circumstances. Hastily to pronounce a pupil obstinate, is not a sufficient justification for unlimited recourse to correction. There is an obstinacy which it may be fairly applied to check ; but there is an obstinacy which its use will hopelessly confirm and increase. Between these the teacher must carefully discriminate. (§ 43.) Where it is purely a fault of temper, voluntarily assumed and persevered in by a pupil of sound health out of caprice or pride, or for the gratification of some depraved taste, it is unquestionably amenable to sharp correction : the teacher's influence and the interests of the school require either its suppression, or the removal of the pupil who exhibits it. But where obstinacy is a constitutional characteristic, partly physical and partly mental, we must beware of endeavouring to subdue nature by strong measures. A continued course of mild treatment may do much to mitigate the evils of such a disposition ; but violence is likely to meet with a sullen, passive resistance, so little guided by intelligence that, rather than yield, it will encounter all extremes, even to the wearing out of the vital force itself.

235. **Expulsion.**—The last punishment within the teacher's power is expulsion. The very constitution of the common-school implies a large toleration of individual faults ; and therefore it is that all other expedients should be tried with the view of reforming an offender before resorting to expulsion. But occasions will occur when the step becomes imperative, arising, as with corporal punishment, not so much from any particular kind of fault, as from extreme degrees of all. Whenever a pupil has established himself as being beyond the teacher's influence or means of restraint, it is the only resource that remains, and one which may be employed with a clear conscience on this ground, that the injury it entails on an individual who is already depraved, is as nothing compared with the injury from which the whole school must be preserved. In carrying out this penalty, however, it would be wise in the teacher to obtain the sanction of the school authorities : as their act, it would carry with it a weight which his position does not always enable him to attach to it.[1]

[1] Pillans' *Rationale of Discipline*, chaps. i. ii. ; *Dick Bequest Report*, 1854, chap. xvi.

CHAPTER III.

THE ART OF TEACHING.

236. Object of the Art of Teaching.—The art of teaching, as applied in the common-school, comprehends all the means by which the teacher sustains the attention of his class.

By attention, we do not mean the mere absence of noise and trifling; or that inert passive state in which the class, with eye fixed on the teacher, it may be, gives no symptom of mental life; nor that intermittent and almost unconscious attention bestowed on some casual topic which strikes their fancy; nor the partial attention given by a few who may be in the immediate neighbourhood of the pupil addressed. The only satisfactory attention is that which is given voluntarily and steadily by all during the entire instruction, and which is the mental attitude of a class actively engaged along with the teacher in working out their own instruction.

We shall assume these convictions on the part of the teacher:—that attention is indispensable to his work; that partial attention implies partial teaching, and that, where there is no attention at all, there is no teaching; that there is but one way of gaining it, which is neither by threatening nor by coaxing, but by engaging his pupils in active work; that the attention of his class is gained only when that of each individual member of it is, and that each bestows it, not because his neighbour is actively engaged, but because he himself is; that even one case of inattention implies a loss of labour on the teacher's part, and that therefore he ought not to shut his eyes to it, whether from indolence or distrust of his ability to deal with it, but fairly endeavour to remove it; that attention is a habit, which grows up gradually out of repeated acts, and that therefore he should demand it constantly, yet in reasonable measure, (§§ 84, 85.)—We are now to be concerned with the conditions under which alone it is to be gained.

These conditions are partly physical and partly mental. A class cannot remain attentive under unfavourable physical circumstances of instruction; where, for instance, it is distressed by the close atmosphere or ill-regulated light of the school; or where it

is fatigued by undue prolongation of its work, and by confinement to one position ; or where it is so placed towards its teacher as not to be fully under his inspection, and consequently to have difficulty in following the work of instruction. Where these circumstances are neglected, the most skilful teacher may well fail to sustain attention (Part i. chap. 11). They do not belong, strictly speaking, to the art of teaching. Assuming that they are regulated according to the requirements of the child's nature, we have here to do only with the mental and emotional conditions of attention.

With this view, we shall consider the characteristics of teaching in order, as they affect the subject-matter of instruction, its arrangement, the mode of communicating it, the language employed, and the teacher's personal manner.

237. **Necessity of adequate Knowledge.**—To teach a subject well, one must know it well : so as to be able to state the facts correctly, and reason upon them accurately. A superficial knowledge may preserve the teacher from plain errors of fact ; but will inevitably show itself throughout the lesson in statements which are obscure, partial, unprecise, or hesitating. It will appear, moreover, in the way in which he deals with the pupils' answers: these often contain but a part of the truth, which he must accordingly supplement, or truth mingled with error, which it is his business to distinguish ; or they may suggest topics more or less intimately related to the subject, which the well-informed teacher alone can satisfactorily dispose of, but which the ignorant is compelled to ignore, or to doubt, or even to censure. The teacher has not to communicate profound knowledge, but he should certainly know much more than he teaches : those are the best qualified to expound the rudiments of a subject who, to their other qualifications, add a thorough knowledge of its applications.

It is in dealing with any of the departments of physical or natural science that the danger of teaching from imperfect knowledge is most to be apprehended. And if it be remembered that these subjects fill not less than one-half of the reading-books used in school, the danger will be seen to be of sufficient magnitude to require a very special caution. The teacher's own education generally makes him at home in grammar and arithmetic ; but it

does not always give him that familiar acquaintance with things by actual observation and manipulation, which alone can fit him to speak about them fully, convincingly, and to the point. We have in this the reason of the general predominance of a verbal and abstract character in the work of the school; and the explanation of the fact that much of the so-called instruction in things passes off into instruction about words only. "I have listened," says Mr. Moseley, "to some hundreds of oral lessons delivered by teachers in elementary schools, and the observation has continually presented itself to my mind, that in such lessons the cardinal defect—that which lies very generally at the root of the failure of such lessons, and makes of what would under other circumstances be the most successful expedient and highest resource of education, in too many cases an impediment to it—is an inadequate knowledge, on the part of the teacher, of that which he is teaching. He may know many things, and be generally a well-informed man, but if he fails in his lesson, it is generally because he does not know the particular subject of that lesson. If his knowledge of it had covered a wider surface, he would have selected matter better adapted to the instruction of children. If he had comprehended it more fully, he would have made it plainer to them. If he had been more familiar with it, he would have spoken more to the point. Wanting this knowledge of his subject, the time allotted to his lesson is filled up with words foreign to the matter in hand, as though it were a time set apart to be covered with a certain amount of talk, and as though a teacher must be assumed, as a matter of course, to be teaching as long as he is talking."

238. **Proper Choice of Matter.**—There is great room for judgment in the choice of matter. The design of a lesson is not to say all that can be said on a subject, or what the teacher knows best regarding it, but what is suitable and important for the pupil to learn. The broad outlines of the subject must first receive attention; the amount of detail being determined by the advancement of the class, or by the time at disposal for giving the lesson. There are various ways in which a lesson may be over-crowded with matter. The teacher may go back to the first beginnings of his subject, and so exhaust his class before he comes to the point in hand; or he may go into all the corners of it,

and bring up facts which are curious rather than useful; or he may wander into matters which are but slightly connected with the scope of his lesson; or, granting that he introduces nothing but what is useful to be known, he may yet be too elaborate and learned for his class. Many lessons are spoiled through an itching after completeness; but it should be remembered that a lesson is complete in the only valuable sense in which it can be complete, when it sets before the class so much of the subject as is useful for them to know, and level to their understanding. If any subject is so fertile in matter as to exceed the limits of one lesson, it should be divided. But it is absolutely labour lost to teach too much at a time: no conceivable resources of teaching can impress upon the mind more than it has the capacity of containing.

239. **Teaching 'with a Purpose.'**—The teacher should form to himself a definite purpose in every lesson he gives. He should be able to say what he is aiming at, and how he proposes to attain it, otherwise he is working in the dark, and much of his labour will lead to no result. A lesson should have a twofold design:—a special and a general: the one to leave the pupil possessed of a certain amount of information upon its subject, and the other to give him a certain kind of mental exercise as a means to that end. Thus it may aim at teaching him the principal facts which he ought to know about some common object, and with that view may exercise his senses in the observation of these; or it may seek to acquaint him with the appearance of a particular district, and with that view to appeal to his imagination by vivid connected description; or it may be designed to give him command of the rule for working a certain kind of problems, and to exercise his reason in the construction of the rule; or its purpose may be to lodge in his memory the incidents of some narrative, and to quicken the conscience to apply the rules of life which these suggest. Both designs must be attained together: each is necessary to the other. The teacher should constantly have both in view, as checks upon his work. On the adjustment of the two processes of instruction and education to each other in the individual lessons—which in the aggregate make up the teacher's work—all rational practice of teaching depends. (§ 62.)

240. **Analysis and Synthesis.**—Knowledge is the result of a

twofold mental process. The learner observes certain individual cases with a view to reach certain principles of classification, then he applies these principles to the arrangement of all the individual cases : he examines examples to arrive at rules, and then applies the rules to the solution of examples. In other words, he proceeds from particulars to the general, then from the general to particulars. By this twofold procedure men construct all the scientific knowledge they possess. In natural history, the observer sees around him (suppose) an indefinite number of animals, and is led by comparison of some individuals to arrange them into groups, each of which is marked by the possession of certain essential features : when he has reached his classification, he does not need to pursue the study of individuals with the same exhaustiveness, for he can tell the structure and habits of any one as soon as he observes that it has the essential features of this or that group. In grammar, a certain amount of observation of individual words and phrases leads to the recognition of so many parts of speech and the establishment of certain laws of flexion and construction ; by which he may then account for all the words and phrases which he meets. In arithmetic, the examination of a few problems of the same kind leads to a general rule of working, by the application of which he may solve all subsequent problems of that kind. And, once more, in geography, observation of natural appearances leads to the establishment of certain general facts, which, in due time, he applies to connect his whole knowledge of the earth's surface. When general principles have thus been reached in the study of any subject, they are accepted as the elements of its logical arrangement, and are the part of it first presented to the mature mind engaged in scientific study. It is according to the logical order, and not (as we may call it) the natural or historical order of development, that text-books in any of the departments of knowledge are framed.

But the teacher cannot put out of view the substructure of particulars on which the elements or general principles of a science have been reared. He and his pupils occupy the position of discoverers : he leads them to acquire knowledge by carrying them along the process by which it was first acquired at all. He has to conduct them through one complete mode of study before they can enter on the scientific mode. He has not simply to teach them

their text-books: he has first to prepare them for these by processes of teaching for which the text-books give no materials. To state the matter technically, he must first teach according to an analytical procedure, and then according to a synthetical. If in natural history, *e. g.*, he has to give a lesson on the 'camel,' he may lead his class to observe the structure of the animal, as its stomach and teeth, its feet and its covering, in connexion with the circumstances of its life; or in virtue of their previous study, he may refer it at once to the class 'ruminating,' and thence descend to the particulars of structure implied in that designation: the one arrangement of the lesson is analytic, the other synthetic. If in grammar, his subject of lesson is the noun, he may set before them some nouns as actually occurring in sentences, and by comparison of their nature reach the general characteristic of this part of speech, that it is the 'name of a person, place, or thing;' or he may, if warranted by the previous instruction he has given them, draw his lesson out of that definition: the one arrangement is analytic, the other synthetic. If in arithmetic he meets a problem in 'reduction,' he may go about, by a consideration of its terms, to discover what is to be the nature of the working; or, assuming previous knowledge, he may commence with the rule already got, and make the exercise consist in its application: the one course is analytic, the other synthetic. He may enter upon the subject of geography, by directing the pupils to observe the sea, or the hill, or the river beside them, so that they may know what these features of the landscape really are; or, starting with definitions of sea, hill, and river, and the like, he may proceed to construct a country or a continent on the surface of the globe as a logical result therefrom: the one course is analytic, the other synthetic. In teaching the art of reading, he may teach them the sounds of whole words, and by comparison evolve the sounds of particular letters; or he may associate with the several letters their respective sounds, and require them to construct the sounds of words by combination of the letter-sounds: the one course is analytic, the other synthetic.

Both methods are right and necessary in their own place: they are parts of one whole, related to each other as antecedent and consequent. The observation of particulars is an incomplete and fruitless process, unless it issue in the establishment and applica-

tion of general principles : but the application of such principles must be feeble and unreal unless founded on previous observation of particulars. In giving lessons, therefore, the teacher must consider which of these two methods, mainly or wholly, he should adopt. Generally speaking, he will find the analytic procedure suitable to young pupils, the synthetic to those who are advanced ; to speak with strictness, he must be guided in this by a consideration of their progress in the particular subject : during its early stages, he will naturally use the one, during its later, the other. Thus he will always have occasion for both ; since there will always be some branch of knowledge, in which even his advanced classes have done little more than made a beginning. And as the mind's operations in acquiring knowledge are not marked off from each other as it were by sharp mechanical boundaries, it will fall to him frequently to use the two methods together : one part of his lesson may require the one, and a succeeding part the other.

241. **Procedure from the known to the unknown.**—Whatever be the teacher's method of exposition, he should arrange his matter in such a way that the instruction shall proceed from what the pupil knows of the subject to what he does not know. This is the natural order ; both in lessons arranged in series where each must necessarily start from the point at which the former left off, and in isolated lessons where each is complete in itself. In almost all cases, the pupil has some previous knowledge of the subject, self-acquired or gathered from conversation with others, or he has some ideas which may be fitly laid hold of to introduce it ; the teacher must endeavour to imagine for himself the amount of this knowledge, and the manner in which it has been acquired. According to his acquaintance and sympathy with the child's mind will be the correctness of his estimate. Following this rule, we shall see that there is no stereotyped plan for giving lessons, even when these are of the same kind. Thus not only do object-lessons differ in arrangement according to the nature of the object ; but a series of lessons of the same kind, as on animals, cannot all be cast in the same mould. For example, a lesson on the 'cat' or 'dog,' 'hen' or 'duck,' would best begin with the structure of these animals, which is familiar from daily observation ; whereas a lesson on the 'wolf' or 'lion' or 'eagle' would best begin with the

habits of the animals, as likely to be more within the pupil's cognizance. So with all other lessons; even in the reading-lesson, where the order of topics seems to be fixed, the teacher should begin with that part of the subject (wherever it may be introduced in the text) with which the pupil has already some acquaintance. This rule applies not only to the beginning of a lesson, but to all its parts; which are in their proper place only when they rest on some preceding part that has been made familiar to the pupil.

If the teacher does not act in the spirit of this maxim, "from the known to the unknown," he is like one who builds without a firm foundation: his instructions will not profit at the time, nor will they have any permanent resting-place in the pupil's mind.

242. Parts of a Lesson.—It is expedient to view a lesson as falling into three general parts, a beginning, a middle, and an end. Such a scheme is required by the mind in everything that is addressed to it, whether it be a school-lesson, or a treatise or discourse of any kind; and is therefore independent of the particular kind of lesson. The *beginning* or *introduction* is designed to connect the lesson with the preceding lesson or lessons on the same subject; or, when the lesson is not one of a series, with some part of the pupil's previous knowledge, in accordance with what has been stated in the last section. Although it is doubtless a subordinate part of the lesson, nevertheless, as instruction is a continuous process, it cannot be too carefully handled, as being a link in the chain by which the parts of the pupil's knowledge are connected. The introduction to a lesson should be *short*, not going back to the beginnings of things so as to overshadow the lesson itself by its bulk; *clear*, considering its design to prepare the way for coming instruction; *useful*, that is to say, dealing with some topic that shall afterwards be referred to in course of the lesson; and *interesting*, with the view of fixing the pupil's attention on what is to follow. In aiming at conciseness, however, the teacher should avoid abruptness and excessive generality of statement, which are incompatible with clearness and interest.

The *end* or *conclusion* of a lesson is that part which seeks to turn the whole to practical account. The proper regulation of our conduct is the ultimate end of all education, intellectual as

well as moral. The teacher should therefore constantly watch all the opportunities which his lessons present of enforcing right principles and right views of things. Every lesson which can be brought to bear on the pupil's character and circumstances should be so directed, that knowledge and action may have that association in his mind which alone gives value to either. No general rule can be laid down regulating the substance of this part of the lesson. Sometimes a religious reflection is suggested, as, *e. g.*, acknowledgment of the wisdom, power, or goodness of God, or of our duty to Him for any mercy He has bestowed on us: sometimes a moral duty: sometimes a prudential rule of life. But whatever be the lessons suggested in any case, we should bear in mind these considerations:—(1.) They should not be *forced:* better not to moralize at all than to do so out of place. Every lesson does not admit of being turned to practical account in this way. Nothing takes the edge off such reflections more than dragging them in where they do not spring naturally out of the subject. (2.) Even when they are quite natural, they should not be *introduced as mere statements.* The good teacher will conduct the whole lesson in such a way as that it shall of itself suggest the reflection. The books which impress morality best are not those which moralize in set terms; but those in which it is woven into the texture of the story. So should it be with lessons in school: when the moral is fairly based on them and follows by plain inference from them, the pupils will infer it for themselves. (3.) There should not be *more than one or two* reflections associated with each lesson. We may say as a rule that a lesson suggests pre-eminently but one leading reflection. There is a habit of teaching which draws any lesson out of any subject: and which brings nearly all lessons to a close in one monotonous cadence. This defeats its own object: lessons which are used to impress anything will certainly impress nothing. Far better to impress but one moral at a time with all its point and freshness, than habitually to blunt the moral perception with lessons which are unreal because not apposite; abundance of time will doubtless be found for all in turn. (4.) Whatever expansion of a moral is introduced, should be not in the way of reiteration, but of application. Select a combination of circumstances, in which the pupil often finds himself, and make him feel how the lesson just deduced should regu-

late his conduct therein. This will make it practical in the strictest sense of that word.

By the *middle* of the lesson is meant the main-subject or lesson proper; regarding which the most important considerations that remain to be noticed are those which regulate its arrangement of parts.

243. Arrangement of Ideas.—The first thing to be observed is that there should be a simple and intelligible plan in the lesson; so that the pupil may catch a broad and well-marked outline to which he may refer the details of information as they are presented to him. No lessons are worse, none more perplexing or more barren of result, than those which consist of a mass of facts of all degrees of importance crowded together promiscuously, so that the place and character of each cannot be distinguished.

The topics adverted to should be arranged in such a way as to exhibit their natural dependence, whether of resemblance, cause and effect, or antecedent and consequent. This is the principle according to which, in an object-lesson (suppose an animal or tree), we should name the parts in the order of their connexion with each other, and the more important before the less: and in a reading-lesson, set forth together (suppose) those arguments in support of a proposition which are of the same kind, instead of intermingling those which are founded on different considerations. Logical arrangement is not only essential to the success of individual lessons, but is valuable from its influence on the pupil's intellectual habits. It prevents confusion in the instruction, and therefore facilitates the pupil's understanding and retention of what is addressed to him: it also silently accustoms him to think in a logical manner for himself.

The parts of a lesson should be well proportioned. Logical arrangement will greatly help this: for the teacher who sees the proper connexion of the parts will probably apprehend their relative importance. No topic should receive so much attention as to prevent the rest from receiving their due; and a topic which is subordinate should not be placed by its treatment on a level with another which is more important. It is not uncommon to find the time of a lesson occupied with a full explanation of what is easy and well known, whilst the more difficult points, on which

the pupil's comprehension of the subject hinges, are but little adverted to.

What is complex and difficult should be divided and subdivided to suit the pupil's capacity. To take in detail what we cannot accomplish by one effort, and to thoroughly master the several parts in succession as we proceed, is the principle of all successful labour, mental or mechanical. It is only by subdivision, which presents to the pupil one point for consideration at a time, and that a sufficiently limited one, that progress in study is possible; but by the aid of subdivision there is no limit to what he can accomplish. The teacher accordingly shows his skill in presenting in each lesson a practicable succession of steps. At the same time he must not simplify over-much; this is incompatible with any vigorous mental exercise. His business is not entirely to remove difficulties from the path; but to present only such as the pupil can by fair exertion overcome. His requirements should therefore always be abreast, and sometimes slightly ahead, of the pupil's capabilities.

Finally, the arrangement of a lesson should not be displayed with undue ostentation. A young teacher is apt to think that he must not only follow his arrangement, but vindicate it; and that, if he does not, it will produce no effect. Experience will tell him however that a good arrangement is none the less effectual, but rather the more so, when it is simply followed and not talked about.

244. Explanation.—The teacher should explain to his class everything in course of a lesson which they may not fully understand. To give the necessary amount of explanation requires considerable vigilance, from the strong and natural tendency to take for granted that they fully understand things which seem to him very simple. But the overlooking of a single important link in the chain may affect their comprehension of the entire lesson. There are three processes, all in a general sense explanatory, which require to be distinguished: explanation (in the strict sense), illustration, and definition.

In the sentence "Passing through Magellan's straits, what a spectacle awaits," the word 'spectacle' would be explained by saying that it means a 'view' or 'scene,' or 'all that we can see on looking around us,' or some similar phrase. The proverb 'What

a man soweth, that shall he reap' would be explained by saying that the consequences of our actions will be influenced by their character, or the like. And so we should be said to explain the making of sugar, when we give an account of the successive steps in the process. Explanation, then, consists in stating an idea or fact in its simplest form. This is a very different thing from illustration, which adduces a particular case of a more general fact. It is a very common fault to confound the two processes, and in particular to make explanation pass for illustration. Both are necessary through all the stages of teaching. New facts and ideas must be both explained and illustrated; on their recurrence explanation may suffice. It may be proper to notice that the mere substitution of one word for another, the giving of a synonyme, does not, as seems to be often supposed, amount to explanation. The idea should be expressed not merely in another, but in a simpler, form.

245. Oral Illustration.—The process of illustration is twofold. *First*, It lies in the substitution of the particular for the general. Thus, in the lines "Passing through Magellan's straits, what a spectacle awaits," the term 'spectacle' would be illustrated by carrying the pupil in imagination to some conspicuous point around him, making him realize all that is to be seen from it, and calling that a 'spectacle.' Again, if we meet with such a sentiment as 'Whatsoever a man soweth, that shall he also reap,' the illustration would consist in referring the pupil to the process of sowing the seed in the ground, and the husbandman's confident expectation that he will in due season reap a corresponding harvest. And again, we illustrate a virtue or duty, such as truthfulness or honesty, when we recount a story in which it is exemplified and recommended. *Secondly*, Illustration consists in substituting one particular case for another with which it is analogous. Thus the boiling of the sugar-cane may be compared to the making of jelly, the melting of lead to that of wax, or the action of any historical character to some supposed similar one within our own experience.—The requisites of good illustration are these:—(1.) It must be *apposite*. If we are illustrating the general by the particular, we must be sure that the cases are related to each other as such: if the particular by the particular, we must be sure that there is an analogy. A false illustration is as

misleading as a false statement: it is from the illustration chiefly and not from the statement, that the pupil will form his impressions of the fact. (2.) It must be *interesting: i.e.*, must be drawn from something which has an interest for the pupil. This implies that it be familiar: it is no illustration to refer a thing or case which is unknown to another which is equally or more so. (3.) It must be *clear* and *graphic: i.e.*, handled in such a way that the essential points of resemblance may be distinctly brought out.[1]

246. Illustration by Objects.—When the lesson is upon an object, whether an oral-lesson or a reading-lesson, the thing should be at hand if possible, so that the qualities for which it is known may be observed. The object-lesson, indeed, cannot proceed to any purpose without this inspection: the process is required, not so much for mere illustration, as because it constitutes the lesson. But an object is sometimes referred to incidentally in course of a class reading-lesson, to illustrate some of its topics; in such case the illustration can seldom be handled satisfactorily without the presence of the thing. This should not be neglected, as it often is, because its presence is seemingly immaterial; the habit of verification which it fosters is invaluable as a safeguard against vague or half-formed ideas. It is very desirable, for the sake of illustration, to have in school a small collection of common objects; which teacher and pupils between them should not have much difficulty in forming, since the value of its contents is to be measured, not by the rarity of the things, but by their commonness.

247. Pictorial Illustration.—As it is but a comparatively small number of objects which can be brought under the notice of a class, however, the want must be supplied, so far as practicable, by pictorial illustration. This is of different kinds—The school should have a collection of pictures of objects in natural history, and also of familiar machines and processes. These should be introduced just at that point of the lesson where they are needed, as they will always be examined more effectively when curiosity has been awakened by previous description: if the pupil is led first to form the image for himself, he will afterwards compare with interest his ideal one with the real. The picture should not be

[1] Abbott's *Teacher*, pp. 181-188.

presented to him before it is to be used; otherwise it will supersede his imagination, and its use will be less impressive. School-pictures should be neither complicated nor elaborate, nor need they be highly finished; they are most effective when they are simple, bold, and spirited.[1] (§ 192.)

The largest collection of such pictures which a school is likely to have will leave abundant scope for illustration by sketching on the black-board. It is very desirable that the teacher should have some facility in doing this, for two reasons:—*First*, There must be many things of which he has no other means of giving his class an idea; and, even of the objects represented in his pictures, it is often necessary to single out a particular part to be examined alone, or to exhibit some part on a larger scale than any picture can afford, as, *e.g.*, the leaf in a lesson on trees; the shape of the foot in a lesson on animals; the relation of a river to a mountain range or some other natural feature in a lesson on geography. *Secondly*, Children watch the construction under their eye of these illustrations with peculiar pleasure, and generally show a strong tendency to imitate such drawings afterwards for themselves. So that the teacher who has this power has a resource for engaging their interest in his subject quite distinct from that which is afforded by a ready-made illustration, such as a picture gives.

Maps should be referred to in illustration of all allusions to places, whether in the lesson on reading, history, Scripture, or objects. In addition to the immediate purpose of the reference, it is by such incidental use of geographical knowledge that it is impressed on the mind and turned to practical account.

248. Abuse of Illustration.—In using illustration two opposite errors are to be avoided. On the one hand, it must be set forth with sufficient amplitude to make an impression on the minds of the class, else it does not amount to illustration at all: good illustration is often rendered useless by the teacher just pointing to it instead of spreading it forth, by his introducing it, as it were, only for the sake of leaving it. On the other hand, a lesson must not be overburdened with illustration. Important as it is, it must be kept in its place of strict subordination to the

[1] *Quart. Journ. Educ.*, No. XVI.

thing illustrated; it should neither be introduced for its own sake, nor unduly protracted. Young teachers of fertile imagination and fluent speech must beware of making their lessons pleasing pictures rather than good mental exercises.

Skill in illustration is in part a natural gift, and in part an acquired power. It is a natural gift, depending on the acuteness of one's perceptions in the observation of incident and character, and in detecting resemblances between things in general; the person of active imagination, moreover, will be able to construct for himself illustrations of a kind which another can come by only through reading. It is an acquired power, depending on the amount of general knowledge which one has acquired through reading: this may suggest that the teacher should steadily keep up his general reading, and that in doing so he should constantly have before him the great use to which he may turn it in his professional work.

249. Definition.—Definition is the expressing of things by the sum of their essential properties. The nature of the process sufficiently determines the place which it holds in school teaching. It must follow observation and illustration. The child does not define; he only illustrates. If we ask him what a metal is, he tells us that it is 'iron' or 'lead;' if we ask him who is 'the good child?' he replies, 'The child that speaks the truth,' or 'that obeys his parents,' or the like. It follows, from the same considerations, that definition should be used sparingly. No small amount of illustration is required to work out even one definition. Elementary instruction should therefore not begin, but end, with definitions. But, on the other hand, since the definition of a thing is that conception of it with which alone the mind can go forward to any higher knowledge regarding it, the teacher must contemplate its use in due time. He may introduce it almost from the first, if he keep it in its proper place and within proper limits. As the pupil advances, his training should make him more and more capable of receiving and of framing definitions. It is as great an error to omit the exercise of abstraction required for definition when the child is capable of it, as it is to force it injudiciously or prematurely on younger classes at a time when they should be mainly occupied with the observation of illustrative examples. The one error oppresses the mind by efforts which it is

not prepared to make; the other enfeebles by withholding those which it has vigour enough to undergo.

250. Preparation of Lessons and General Reading. — It cannot be necessary to insist on the importance of a careful preparation of lessons. There are no doubt some which the teacher may be expected to give adequately without special preparation, in virtue of his general knowledge and cultivation of mind, such as those on language and number; but there are others, such as those in religion and in any of the branches of real knowledge, which will generally require more or less of this preparation for their effective teaching. Some will require it for one thing, some for another. In some it may be necessary in order to give him the *necessary extent of knowledge.* When the subject is of a familiar sort, it may seem to him that his general information is sufficient to warrant him in at once entering on its exposition; but if he will reflect that he is about to give the pupil those fundamental notions of the thing on whose soundness the character of all subsequent knowledge of it will depend, he may perhaps be led to doubt whether his information is sufficiently extensive, or his conceptions sufficiently clear for that purpose. Without preparation, he will be very apt to dwell on what he happens to remember rather than on what is important; and he will often find that some of the links have slipt from his grasp, which are essential to connect the parts of his subject. The habit of teaching from inadequate knowledge is, as has been already remarked, the cause of much profitless and uninteresting labour, not only to the pupil, but to the teacher himself. Other lessons will need preparation with a view to their *arrangement.* Even when one has a thorough knowledge of a subject, he can seldom fall into the best plan of communicating it without previous reflection: the simplest and most elementary subjects are no exception to this rule. Finally, many lessons will require preparation with a view to their *illustration.* To find suitable illustration is often the most difficult thing in a lesson; certainly it will not present itself unless it be sought for. When the illustration is to be drawn from objects of any kind, the teacher will generally find it expedient to examine them beforehand: his references to them will be more definite and confident, when made not to his idea, but to his experience, of them.

But besides the direct preparation required for his daily work, there is an indirect preparation of a still higher kind, and fertile in a still richer influence. He who is engaged in forming the minds of the young should not only teach; he should also be a learner. He should have his own subject of private reading and of private study: no matter whether this be allied to the subjects of his professional work or remote from them, it will contribute to their vigorous and effective handling. For it will keep his mind fresh and flexible, and his sympathy with his pupils' efforts and difficulties tender and buoyant. The teacher who has no private reading, has no love for reading; and is therefore destitute of that living spirit which alone can inspire his pupils with that love. The substance of his knowledge has become commonplace by the daily tear-and-wear of communication: it has as little beauty or interest for himself as for his pupils. When he ceases to learn, he descends to a position below that of his scholars; for to be learning is the highest intellectual tendency of our nature. We would admonish him, therefore, that he "ought to be perpetually learning, and so constantly above the level of his scholars." "I am sure," says Dr. Arnold of his pupils, "that I do not judge of them or expect of them as I should, if I were not taking pains to improve my own mind." "The constant pursuit of new attainment," says Professor Menzies, "is necessary to the teacher, in order to preserve the elasticity of his mind, to refresh and enrich it, to maintain its strength by exercise, and its alacrity by the consciousness of advancement. And although his present study may be apart from and beyond the subjects of his teaching, his pupils, nevertheless, reap from it a large benefit. A mind engaged itself in acquiring can better sympathize, than a mind standing still, with the youthful effort to acquire. The intellect is sharper, the affections are more tender. On all sides he is more impressible, and consequently more ready to give out, than if his powers were relaxed by the cessation of effort. Thus, for the sake of his pupils, as well as for his own sake, the work of mental cultivation is to the earnest teacher a work that never ceases."

251. **Notes of Lessons.**—The young teacher will find the preparation of his lesson materially aided by making a sketch of it in the form of notes. These should not be limited to the mer

heads of instruction; in which form they would be too general to serve the end for which they are framed. On the other hand, they should not consist of a minute series of questions, such as it may be supposed the lesson will actually present when given. A lesson, whose form is thus predetermined, is never successful; being of necessity deficient in that elasticity and that adaptation to thoughts suggested in the very act of teaching, which are of the essence of successful instruction. The notes should contain the principal topics to be touched on, arranged in the order in which they are to be taught, and so as readily to catch the eye: and also the illustrations to be used under each. It would further be expedient for the teacher to reflect beforehand on the manner in which he shall present the several parts of a subject: for all else, his language, his questions, and the precise degree of attention to be paid to each point, he must trust to his skill in teaching, which, as it is a habit, cannot be got up for particular lessons. These notes should not be used in the process of teaching. A lesson seldom succeeds which is taught with frequent reference to written notes; the hesitation and interruption thus caused being very unfavourable to sustained attention from the pupils. The substance of them should be lodged in the teacher's memory: so that during the actual teaching nothing may come between his own mental activity and that of his class.

The labour involved in preparation amply repays itself. The teacher who undergoes it feels his motives to duty strengthened and elevated. Conscious that his instruction becomes of value and interest in consequence of the labour he has expended on it, he desires, like all in a similar position, to obtain an adequate return for that labour on the part of those for whom it is undergone. He teaches, not in the spirit of routine, but because he has something to say. He is anxious that his pupils should exercise their intelligence on what he has prepared for them; he appeals almost unconsciously to their love of knowledge; and he is pleased when a casual answer opens up a new train of thought. He will not often be disappointed in his anticipations. On the other hand, it will be in vain for any teacher to look for the symptoms or results of honest hearty work from his class, when he habitually meets them with the doubtful knowledge, disorderly questioning, and meagre haphazard illustration which necessarily mark unprepared instruction.

252. Examples of Notes.—

1. Reading-Lesson.—Winter.

The scenes around us have assumed a new and chilling appearance. The trees are shorn of their foliage, the hedges are laid bare, the fields and favourite walks have lost their charms, and the garden, now that it yields no perfumes and offers no fruits, is, like a friend in adversity, forsaken. The tuneful tribes are dumb, the cattle no longer play in the meadows, the north wind blows. "He sendeth abroad his ice like morsels: who can stand before his cold?" We rush in for shelter.

Introduction (before Reading).—

Vacation ramble—visit to a friend in country—day fine, clear, and warm—what seen on way—road dry—bordered by hedges and trees—their appearance described—cattle in fields and under trees—birds singing around—on arriving, did not stay long in house, why?—fields where hay-making was going on—out all day—evening walk in garden—scents of flowers, name some—fruits, name some—(all these points to be elicited from class, but not dwelt on)—always so? (Passage now read.)

Main Subject—Appearance of Winter.—

"The Scenes, etc." Same journey in winter—appearance same?—general points of difference—cold, perhaps snow, or frost—how we feel? chilled—appearance to eye—everything bare; so that we hardly know it to be the same—"*The scenes around us have assumed a new and chilling appearance.*"

Trees and Hedges. What bordered the road in summer? change on trees and hedges—all the leaves disappeared—name for 'all the leaves' by what caused—rude blasts of autumn or the sharp frosts—entirely stript or shorn—"*The trees are shorn of their foliage*"—appearance of hedges—bare and prickly—no longer a pleasant green wall with birds in them—"*The hedges are laid bare.*"

Fields and Walks. What made the fields so pleasant in summer?—grass, lambs, hay-making, etc.—what made the walks so pleasant—shade, scent, wildflowers, bees, and butterflies — appearance now—"*The fields and favourite walks have lost their charms.*"

Garden. What we walked in the garden for in summer? its state in winter—wet clammy leaves covering ground, flowers withered, no fruits—nothing to please the eye or the smell—in summer it has something to give, in winter nothing—we turn away, glad to leave it—just as people sometimes treat their friends,

visiting them when prosperous, but forgetting them when they come down in the world, and have nothing to give—"*The garden, now that it yields no perfumes and offers no fruits, is like a friend in adversity, forsaken.*"

Birds and Cattle. Besides the trees and grass, what made the roads and fields so pleasant in summer? birds—name one or two that sing—where are they now?—name any winter birds—pretty, but no song—what seen in meadows in summer? cattle—where now? —why? no food and the cold—"*The tuneful tribes are dumb, the cattle no longer play in the meadows, the north wind blows.*"

Cold and Ice. What causes cold in winter—north wind—how it does so —hail and snow and ice—so that we cannot remain out as in summer—hasten home—allude to its comforts—"'*He sendeth abroad his ice like morsels; who can stand before his cold?*' *We rush in for shelter.*"

CONCLUSION—PRACTICAL LESSON.—

Explain the inverted commas in last sentence, and then bring out the sense intended, that winter comes from God—we like fine summer days and feel thankful for them—God is good in giving so much happiness—but beauties in winter also—allude to them—and then that season is useful in preparing for summer again (allude briefly to this, as the uses of winter would be the subject of another lesson)—God has made winter too, so we should praise Him for this season and its comforts as well as for the summer. (Have the passage now read again.)

2. READING-LESSON.—THE OWL.

While moonlight, silvering all the walls,
Through every mouldering crevice falls,
And tips with white his powdery plume,
As shades or shifts the changing gloom,
The owl that, watching in the barn,
Sees a mouse creeping in the corn,
Sits still, and shuts his round blue eyes,
As if he slept, until he spies
The little beast within his reach,
Then starts, and seizes on the wretch.

INTRODUCTION (before Reading)—

Appearance and habits of the owl, so far as referred to in the passage—not often seen, why?—its haunts described—

barn-owl—its prey and manner of catching—size and appearance—colour—eyes—show picture of owl if at hand. (Passage read.)

MAIN SUBJECT—

The Moonlight. Recollections of a moonlight night—clear, pale light on road, field, trees, hedges, houses, and everything exposed—colour of the light contrasted with sunlight—silvery as compared with golden. "*While moonlight, silvering all the walls.*"

The Scene, a Barn. A barn, for what uses?—Appearance of an old barn, from their own observation—stones loosening, so as to make holes or *crevices*—influence of wind and rain—*mouldering* crevices—recollections of moonlight entering a chamber by any chink—appearance in barn—streaks of white light making everything white it falls on. "*Through every mouldering crevice falls.*"

The Owl. The owl—sitting in the light—its colour again referred to—word denoting all its feathers, *plumage* or *plume*—its *powdery* plume—illustrate from hair-powder (if class have seen it)—effect of moonlight upon it—light clouds sailing across the moon—their effect on objects—on the owl. "*And tips with white his powdery plume, as shades or shifts the changing gloom, the owl that, watching in the barn.*"

Its Prey. What he waits for—mice in corn—natural place for them to be—creeping motion—owl's cunning—mouse deceived—capture of the poor mouse—mode compared with that of cat—"*Sees a mouse creeping in the corn,*" etc., and "*seizes on the wretch.*" (Passage read again.)[1]

253. Teaching and Examination.—The work of teaching includes two parts which it is necessary to distinguish; *teaching*, in the strict sense of the word, and *examination:* in the one of which the teacher conveys knowledge to the pupil (by whatever channel), and in the other exacts from him the learning of some task. Whilst the object of school-education is to accustom the pupil to learn for himself, it would be a great mistake if the work were made, as it often is made, to consist of nothing but the examination of tasks. The child cannot learn till he is taught how to learn; there is a method even in the most mechanical acts of learning, much more in those which imply intelligence. But if he could do so, he would not: the exertion would be tedious

[1] For examples of Notes of Object-Lessons, see § 403: and of Bible-Lessons, see §§ 422, 426.

and uninteresting; in short, would be destitute of motive. The teacher must therefore not only show him how to learn, but also give him motives for learning. He does the former by oral instruction, in which he not only gives the pupil all needful assistance for particular tasks, but accustoms his mind to the proper method of learning. He does the latter by making learning more or less a pleasant occupation; through the use of the various expedients which have been explained in detail in the chapter on Discipline.

The proper adjustment of teaching and of tasks to each other is essential to the healthy progress of school-education. There must not be exclusive tasking, for reasons just given; and there must not be excluaive teaching, for this would never bring up the pupil to independent self-sustaining work. They must go on together from the first day of school attendance to the last; though in varying proportion according to the pupil's advancement. With the youngest pupils, the work is almost wholly teaching; as they advance, the learning of tasks increases, but is still subordinate to oral teaching: with senior pupils tasks and examination become the principal (though never the entire) occupation.

Teaching and examination have their respective methods.

254. Method of 'Teaching.'—Continuous direct address or lecturing is not suitable as a method of school teaching. The teacher does not know whether instruction thus conveyed is adapted to the child's wants and capacity: he assumes in them a power of attention and of following connected discourse which, so far from their possessing, it is the very end of their education to bestow, and thus he stirs up no real mental activity within them: he has no security whatever that what he addresses to them is received into their minds as part of their intellectual furniture. It is matter of experience that under this method of teaching children acquire neither interest nor capacity in working. Where lecturing is not employed out of pure ignorance of the child's mental constitution, it is the result of indolence, since it is easier just to say what one knows than to secure that what he says is understood by those to whom it is new; or of vanity, since this mode of address is not unlikely to gain applause from the many, who cannot estimate its character, however objectionable it is to the few who can.

The method of teaching by question and answer meets all the defects of lecturing; but it does more. It enables the teacher to ascertain precisely the extent of the child's knowledge, and thereby to adapt his instructions to the child's wants: it may graduate the mental work required from the class, whether in respect of attention or intelligence, to their capacity at any time: it furnishes a satisfactory test of the pupil's comprehension of the lesson. Beyond clearing the way for instruction, keeping the child's mind active, and testing results, it is in the hands of the skilful teacher a means of leading the pupil to acquire knowledge for himself, which is the most satisfactory way of acquiring, to the extent to which it is practicable. Notwithstanding its advantages, however, questioning is not to be employed as the exclusive method of teaching.

Good teaching requires a union of two methods: *questioning*, to ascertain what information the pupil needs, and to make him find out for himself very much that he can readily do: and a certain amount of *direct address* intermingled with the questioning, to give him the information which he cannot discover for himself, or only by an extravagant expenditure of time, and to set before him in a connected form what he can only discover for himself in a fragmentary way, but what nevertheless is not apprehended at all except in such a form. The whole method of teaching in any particular lesson, therefore, is to be estimated by the judgment with which these two parts of it are combined by the teacher.

255. Tentative or Preliminary Questioning.—The first object of the teacher's questioning in any lesson is to find out precisely the extent of the pupil's knowledge of the subject. What he has to communicate must be joined on to what the pupil already knows: and he can only ascertain the proper point at which to commence his instruction by sounding the child's mind by preliminary questioning. If he comprehends the purpose of this exercise, he will not need any rules to conduct it; none can be given, indeed, except this general one, that he must just search out all the weak points in the pupil's knowledge, pressing him closely and more closely till he ascertains its amount, however small that may be.

A process so evidently necessary attains more than one end:

Besides clearing the way for the lesson in hand, it will accustom the pupil to the temper in which he should conduct all study; it will lead him to doubt his supposed extent of knowledge and to discriminate clearly what he knows from what he does not know, which is an invaluable intellectual habit. This preliminary questioning ought, moreover, to gain the child's attention for the coming instruction; which is clearly indispensable to his receiving it. The skilful teacher is not he who can simply impart instruction to those who are able and willing to take it; but rather he who can dispose towards its reception those who are unwilling or indifferent. He creates the desire, before he exacts the effort, to learn. It is as useless (and we may say injurious) to proceed with the instruction of a careless pupil, as it would be to require him to take food without an appetite. It may fairly be required of the teacher to provide both the intellectual meal and the appetite: with a sensible method and a pleasant manner in introducing his lessons, he has it in his power to do so.

256. 'Instructive' or Socratic Questioning.—Questioning, as we have seen, may be so constructed as to make the pupil discover truth for himself: by such questioning, sometimes called Socratic, the ordinary work of instruction proceeds. When well conducted, it will be found to be arranged in close logical connexion of parts, each answer being used as the means of attaining some further result. There is the same reason for this connexion, as there is for a lesson being logically arranged at all; in fact the outline of the questioning should correspond precisely with the 'plan' of the lesson, the interrogative form of the language affecting not the arrangement of the ideas, but only its working out. From its very nature, this kind of questioning should not communicate directly any of the facts which it aims at eliciting: there is a failure of skill on the part of the teacher when it does so. If the answer to a particular question is not forthcoming, he should go back a step or two, and resolve the question into one or more which may be simpler. The object in view is to carry the pupil along a succession of steps, in which he shall see before him the facts we wish him to learn; the means for reaching the facts should be put into his hands, but not the facts themselves. It is of comparatively little consequence that he accom-

plish the intellectual process which is the aim of the questioning *in a given time;* but it is of importance that he should accomplish it *for himself.* Another caution is necessary, especially to those who have been accustomed to questioning only for the purpose of testing the pupil's knowledge, viz.: that the teacher must be careful as he goes along to assume nothing as known by the pupil regarding the subject, except what he has ascertained to be known by the preliminary questioning, or what the lesson, so far as it has gone, has elicited. Finally, the steps of the reasoning, as conducted under questioning of this sort, ought to be simpler or more difficult, like the steps of reasoning in any form of language, according to the advancement of the class.

It must be understood that all that has been said about questioning applies to it within its own province, as part only (though the greater part) of that mixed method of instruction by questioning and direct address, which is the suitable method for the common-school.

257. Learning of Tasks.—Besides teaching in the ordinary sense of the word, the teacher has to exact from his pupils the performance of prescribed tasks. These may be learned at home or in school. It is better that they should be learned at home, so as to save the time of the school. Hence the practice of all good schools is to give out a certain amount of home-work. But in districts where education is backward and parents careless or ignorant, this may be impracticable: accordingly tasks should be set for preparation during school-hours. The essential point in the matter is, that tasks must be learnt, wherever they are learnt; being indispensable to sound intellectual education.

The setting of tasks implies on the part of the pupils the power of learning. The youngest children have not this power, and should therefore be exempted from tasks for a time. The tasks which should be set to elder children are very various. They may be taken from any part of the school-work, and should be regulated in their character by the capacity of the learners. Generally speaking, the mental exercise required to learn the tasks set to the younger children will be of a comparatively mechanical sort, such as is implied in committing to memory, writing out passages for spelling, short themes to cultivate their acquaintance with words, and performing questions in arithmetic.

Advanced pupils, whilst they may have similar tasks prescribed, are competent for others requiring an exercise of higher intelligence, such as the study of a passage from Scripture or from their English reading-book : this is a fair task for them, because their previous education may be assumed to have given them the ability for such study. Both in junior and in senior classes, the reproduction of oral-lessons, orally or in writing, is legitimate and good task-work.

The teacher must diligently take cognizance of the result of all the tasks he sets, if he means them to be of any effect. At stated times, he must examine the pupils on their preparation. This he may do by oral questioning, or in other ways. With the higher kinds of tasks, he can do it only by questioning.

258. **Examination-Questioning.**—That kind of questioning which is designed to test acquired knowledge, as it differs from the others in purpose, so is subject to rules of its own : which the extent of its application makes it very necessary to discriminate. These follow immediately from its design, which is simply to test the results of the pupil's study. It should be searching, so that a superficial, may not be able to pass itself off for a thorough, preparation : for which end it should lay stress on the most important points in the lesson rather than on those which are most obvious. It should not go beyond the limits of the task prescribed, either as to the extent of ground, or as to the nature of the preparation which has been enjoined. It should not forget its own design and become suggestive, giving a clue to the answers instead of leaving the pupils to show distinctly the character of their preparation. The influence of fair and honest questioning on that preparation is manifest : where they know that they will be truly tested and receive credit for their diligence, they have a strong motive to diligence : where the test is imperfect, unfair, or unsteady, it holds out the chance of escape to those who are unprepared, and thus virtually encourages a low standard of preparation.

The teacher has constant occasion to use all the three kinds of questioning which have been described ; not apart from each other, but in close conjunction. Thus in oral instruction, which has been wrought out (suppose) by means of Socratic questioning, he devotes the concluding part of his lesson to examination of the

results which have been reached; and so he uses examination-questioning. Whilst in his examination upon some prepared lesson, he will generally have occasion to work out some important points in it more fully as he proceeds: for which purpose he resorts to the Socratic questioning. The two are intermingled, so as to be hardly distinguishable by the unskilled observer: but it is most essential that the teacher should apprehend both, not only as they are contrasted in their design and construction, but as they must be combined for the purposes of good teaching, and that he should be able to pass from the one to the other as occasion requires, with a conscious purpose, and without confounding their characteristics.

259. Defective Forms of Questioning.—The essential features of the different kinds of questioning have been mentioned: certain faults of structure in single questions, incident to all kinds alike, remain to be noticed.

Questions should not be ambiguous or indefinite; that is, susceptible of more than one answer, either from the doubtful meaning of some of the terms employed, or from their width of comprehension. There are always some pupils in a class forward and thoughtless enough to answer by guessing, or to make a small stock of routine conventional answers, which they have observed to pass on previous occasions, go as far as possible: the habit of vague questioning gives to such pupils the entire advantage over the modest and thoughtful, who are perplexed by not seeing the mark at which to aim their answers, and who are above answering at random.

Leading questions, or such as embody their own answers should be avoided. They most commonly occur along with, and as a sort of reaction against, the indefinite questioning just referred to; when the teacher fails to show with sufficient distinctness what he is aiming at, he is tempted to get out of the difficulty by showing it too plainly. Thus, if he asks, 'Mention another quality of lead,' and either gets no answer or a number of answers he probably pitches his next question in this form, 'Is it hard or soft?' and saves his class any further trouble in thinking of the matter. The two kinds of questioning, between them, effectually deprave the mental habits of a class.

Questions which admit of being answered by a simple aff

tive or negative are, as a rule, objectionable. In certain circumstances they are proper and indeed unavoidable: it may often happen, for instance, that the conclusion to a series of inferential questions is naturally brought out by a question requiring such an answer; but this is the exception. The practice of putting isolated questions of this kind has a bad effect on a class; even where the pupil who answers has to choose fairly between the 'yes' and the 'no,' his chance of being right is equal to that of being wrong: if he is wrong, his next neighbour will profit unjustly by his venture; but, in the general case, the right answer is clearly indicated by the tone and manner in which the question is put, or even by its very terms, so that the pupil who answers may gain credit without the slightest exercise of thought.

Questioning on the subject-matter of a prepared passage should not be verbal, that is, expressed in the words of the text-book, with the intention of eliciting answers similarly expressed. It is a very barren exercise to ring changes upon a sentence by questioning out of a class, first the subject, then the predicate, then the object, and then perhaps the adjuncts, in succession. The answers may all be given from memory, and their perfect readiness and correctness is no proof, or even presumption, that the pupils understand the sentence from which the answers are drawn. If the teacher wishes to test their intelligence upon what they have read, he must question them on the subject-matter in his own language, and require them to answer in theirs. At the same time, all questions are not to be considered as verbal which require answers in the words of the text-book; for it is often of importance that the pupil be able to carry away a certain precise form of words, *e.g.*, the terms of a definition.

Questions should not be put which the pupils cannot reasonably be expected to answer. These lead to one or other of two results: guessing, a most injurious habit, whether intellectually or morally considered, or silence, which discourages a class. Where a class is repeatedly subjected to a sense of failure in this way, its self-confidence is shaken, and the best guarantee for its success thereby destroyed. The teacher should consider well, therefore, before he questions his class on such matters as measurements and technical names, whether he has any reason to expect an answer. Still less should he press them with such ques-

tions, and compel them to give an answer for no other apparent purpose than to expose their ignorance : a pupil who is thus, as it were, entrapped and made a foil to show off the teacher's superior knowledge, may well be excused if he be slow to answer for the future.

The design of good questioning is to accustom the pupils to honest, clear, and direct thinking. It is a difficult task enough to obtain this from them even in the most favourable circumstances. All the forms of defective questioning that have been specified, agree in interfering with their progress in this exertion of intelligence, and in directly fostering the contrary habits of inattention, thoughtlessness, and indifference.

260. **Elliptical Questioning.**—Elliptical questioning is that which requires the pupil to complete a sentence of which the teacher has given the greater part : the blank being more or less complex according to the advancement of the class. It keeps up the continuity of the lesson with less severe exaction of thought from the pupils. It is less formal and more encouraging : the teacher, as it were, identifies his thinking with theirs, and gives them an impetus which, when he withdraws his aid, appears sufficient to carry them on to the end of the process. It may be used occasionally in any class ; but its frequent use is, from its very nature, more suitable to younger, and especially to infant classes. Not even in these however should it be used alone ; great as are the aid and sympathy they require, they must be habituated to give direct and independent answers, and therefore to direct interrogation. For advanced classes elliptical questioning is, as a rule, quite unsuitable.

As elliptical questioning differs from interrogative only in form the rules which have been given for the one virtually apply t the other also, but these cautions are peculiar to the former :—Tl ellipsis generally requires a single definite and important word be supplied, but it may be as long as the class can be expect to supply. It should present itself without previous notice, si as is often given by the teacher raising his voice or making sc gesture at the moment of its occurrence ; if the pupil can dep on getting a cue, his motive to continuous attention is n weakened. Ellipsis and interrogation should not be conjoin the same question. The ellipsis should be fairly presented ;

assistance as is sometimes offered in the shape of half of a word being always objectionable. Where this seems necessary, the teacher may conclude that he is framing his ellipses unsuitably, or that he is not keeping up the attention of the class. When an elliptical question fails of being answered, the mere repetition of it is useless; the class has not caught the impetus necessary for the answer, and the point must be presented to them again in other language.

261. Individual and Simultaneous Questioning.—All that has hitherto been said of questioning applies to it whether employed in private or in public instruction. The kind of it which we are here concerned with, the *class-questioning* of a common-school, has this peculiar object in view, which distinguishes it from questioning addressed to a single pupil, that it must act upon the whole class together. This at once constitutes it a distinct branch of the art of questioning: without the study of which the teacher may indeed be fitted to instruct individual pupils, but is not qualified to conduct the instruction of a common-school.

It seems natural at first sight to regard a class simply as the aggregate of its individual members, and to instruct it as such by addressing questions in succession to the several pupils individually, either straight round the class, or in some other order. If the teacher can rely on the attention of the whole class whilst he is addressing a particular member, there is no objection to this method; but with the ordinary classes of a common-school he cannot do so. Their attention will wander in the non-activity to which they are consigned, whilst the teacher is engaged with some particular pupil. And thus whilst each may have the full proportion of time devoted to him to which he is entitled out of the whole period given to the lesson, he receives but a fragment of the whole instruction. In small classes, where the questions come speedily round, this danger is to a certain extent obviated; and in larger classes it is obviated less or more by the teacher habitually directing questions *out of order* to particular parts of the class for the purpose of testing their attention. But the check is not complete; whence we conclude that questioning which is purely individual is deficient as a means of class-instruction.

The opposite manner of instruction is that which regards a

class as if it were a single individual, and addresses questions to the whole, in the expectation that the whole will answer. This simultaneous questioning, as it is called, keeps the class working as a whole ; it is, indeed, a most plausible method, since all the questions are answered after some fashion, and the lesson assumes the appearance of proceeding with great animation. But it does not secure the working of each individual in the class : some pupils will not answer at all, whether from indolence, or timidity, or dulness : others will expertly catch up the answers suggested by their neighbours ; a few who are able, or, it may be, forward, will do the duty of answering for the whole, even if all be supposed to answer. The style of answering which it requires is entirely mechanical, for the most part consisting of single words ; thoughtful answers, which require a fuller expression, and which are differently expressed by all who give them, would be lost in the confusion of many speaking at once. All experience shows that when a class accustomed to this method of teaching is examined individually, the pupils show none of the readiness which they showed collectively, but on the contrary all the embarrassment of a new position, and all the feebleness which results from the absence of independent action and responsibility.

Though this mode of questioning is unsuitable for instruction, it serves an important purpose in school as a means of securing the results of instruction. Thus if the teacher wishes to impress any particular point on the class, such as the correct sound of a word in reading, or its spelling, or an arithmetical table, or some fact in geography, or a date in history, or the definition of some term, or generally if he wishes to have the outline of a lesson recapitulated, he cannot attain his end more speedily or effectively than by calling on them to enunciate it simultaneously, as often as he thinks necessary. Repeated and forcible utterance, such as this practice implies, is a strongly impressive act.

262. Class-Questioning.—Effective class-questioning must combine the individual and simultaneous methods, so that all the pupils shall profit by the instruction addressed to any one, and the whole lesson be continuous to the whole class. The questions should for this purpose be addressed to the class collectively ; those who can answer should be directed to indicate the fact by

pointing with their hand to the teacher; one should be selected to give the answer; those who are not satisfied with it should continue to point, and another should be selected to amend it. In this way, the pupils cannot reckon on the question coming to them just at a certain time; there is a pressure on all to answer mentally at least; and the maximum amount of knowledge is extracted from the class. Only the teacher must be careful to secure a fair distribution of the work.

This mode of questioning should be regarded as the ordinary one for younger and middle classes; for advanced classes in which pupils have greater power of attention, and do not therefore require to be subjected to the same checks, individual questioning should be combined with it. It is expedient, moreover, that a severer test should be applied to them than what is furnished by a single question, and therefore that they should be accustomed to answer a series of connected questions. Whilst one pupil is being questioned, the teacher must rely for the attention of the rest on their previous training and good sense, and on his personal influence over them: at the same time he should frequently test the degree of attention which they have bestowed by questioning them on the ground which has been explored in their hearing.

263. Methods of Examination.—In examining his class on prepared tasks, the teacher should study the utmost economy of time that is consistent with effective working.

Suppose, for example, he has to hear a catechism-lesson; he may require all the pupils in succession to repeat the answer to the particular question, which is a complete test of preparation, but occupies much time: or he may require his class to write down the answer simultaneously on their slates, cause them to change slates, have it read aloud by some one and corrected if necessary, and then require all who are right to signify the fact in some way agreed upon: this is also a complete test, applied in a short time. The advantage of a test of this form in the spelling-lesson is still more obvious. In no case can the teacher hear all the pupils spell all the words prescribed, so that the test of oral individual questioning is defective: a pupil who spells a single word rightly may notwithstanding be imperfectly prepared, while another also spells a single word wrong may nevertheless

have prepared the lesson at least in a manner beyond what he will get credit for. But if the teacher requires all the words, or leading words, to be written down, slates changed, each exercise tested by mutual examination, and its errors marked at his dictation, he has the means of applying a thorough test in a comparatively short time. By the same machinery of written questions might he with great advantage occasionally test the preparation bestowed by his advanced class on the scope of some prescribed passage. In each of the cases supposed, the written test corresponds to that mixed method of individual and simultaneous questioning which is the best adapted for the instruction of a class.

Some of the school exercises, reading for instance, do not in their nature admit of any other test than that supplied by purely individual questioning: it is impossible to say whether the class can read a particular passage otherwise than by hearing each pupil read it. In such a case the test cannot be applied to the whole class in each lesson, from want of time; but the mode of applying the test should be such as to keep each pupil under a constant sense of responsibility for his preparation. In other lessons again, such as the geography-lesson, the scope of a passage, and the Bible-lesson, time does not generally admit of the written simultaneous test being applied extensively enough to cover the whole ground; so that the teacher must rely on the ordinary oral questioning. It is in lessons which are definite in their nature, such as spelling, arithmetic, and the learning of a passage by heart, that this test is applicable. In the hearing of all tasks, however, it will often happen that a little ingenuity of contrivance will direct the teacher to short modes of attaining his end.

The supervision of the home-exercises is a part of school-work which he can seldom overtake unaided; but which he can readily accomplish by assistance from the pupils themselves, turned to account under a check similar in spirit to that already noticed.

264. Answering.—The complement of good questioning is skill in disposing of answers.

The first point of which the teacher needs to be reminded is that his business is not only to receive the answers which may be offered, but to encourage the habit of answering over the whole class. For which purpose he must show that he expects all to

answer, and address himself specially to those who are disposed to remain silent.

It is so pleasant to teach the able and willing pupils, and so great a trial to labour upon the dull and the backward, that it is hardly to be wondered at that he should so often give way to his besetting temptation of confining his attention to the brilliant few, and leaving the many to advance as best they may. But there is nothing by which the conscientious and faithful teacher is more certainly distinguished than by his caring for all his pupils: and it is something to be able to add that, by all whose good opinion is worth having, his success in his work will be estimated not by the striking appearance of the few, but by the creditable appearance of the many. "The test of a good schoolmaster is his power of improving the class of average boys; the test of an excellent one is his success in raising those who are below the average. And to these the teacher should turn his attention, on the same principle that the economist is advised to take care of his pence and leave his pounds to take care of themselves." [1]

The teacher should encourage all to take part in the work by the manner in which he receives their answers: not sharply rejecting those which are wrong, but approving all which give evidence of honest effort: not expressing wonder at a pupil's ignorance, or accepting answers as mere things of course: and not turning false answers into matter for ridicule, for which in truth there is very small room. This is a point of which a teacher will become more and more satisfied the longer his experience; that the answers of children, often apparently strange, are not nearly so often stupid as they at first appear to be; that there is generally reason in them, if only he could place himself precisely at the child's point of view and discover what it is. A teacher must have the full confidence of his class before they will answer with readiness; if they fear the consequences of making a mistake, they will be slow to put themselves in his power.

265. **Qualities of good Answering.**—The two qualities characteristic of good answering are thoughtfulness and distinctness.

Whilst the teacher encourages thoughtfulness by expressing his approbation of any answer which exhibits it, he must be careful

[1] *Quarterly Review*, No. ccxvi.; *Arnold's Life*, pp. 103, 104.

not to make this quality unattainable by insisting on *immediate* answers to all his questions. In many cases the question is of such a nature as to admit of such an answer; but in questions which require reflection, he should not only not encourage hasty answers, but he should not accept of answers at all without giving a reasonable time for thought. Not only will this practice increase the number of good answers to his questions; it will tend to give the pupil the valuable habit of thinking before he speaks.

No answers are satisfactory which are not distinct so far as they go. The pupil often hints, rather than utters, his answer, in the hope that the teacher will supply what is wanting, in short, take all the trouble of putting it into the shape desired; and in this design he but too often succeeds. Such answering should not be accepted. It is worth while, on many grounds, to insist on the pupil fully and distinctly enunciating what he has to say; whether single words suffice for that purpose, as they will to a great extent with younger pupils, or whether phrases, sentences, or even paragraphs, are necessary, as they must often be in the case of advanced pupils. This compels them to make their thoughts clear to themselves. It accustoms them to fluent expression, whilst it shows the teacher the amount of their knowledge, and thus leads to more pointed and suitable instruction.

266. The reception of Answers.—There is one way of dealing with answers which is not uncommon, and that is, to reject all which differ from the particular answer the teacher wants. This may be easy for him, but it is neither profitable nor fair for the pupil. For different capacities and temperaments will view the same fact in different ways; each pupil will state it in the way in which it strikes himself. When the teacher restrains the free expression of thoughts, he represses rather than develops intelligence. Others err by going to the opposite extreme. In an uncritical spirit, and in a loose and helpless way of proceeding, they seem willing to accept whatever is offered them; endorsing with a 'yes' any composite of truth and error, if not directly, at least with a very feeble and meaningless limitation. Both of these practices indicate an entire absence of that resource in meeting answers which constitutes one of the most prominent elements in the art of the teacher.

Answers of all kinds are forthcoming, containing various proportions of truth, from entire error to the entire truth, and evincing similarly various degrees of thoughtfulness in the framing of them. The teacher must therefore judge of them by a double standard: the amount of truth which they embody, and the process of thought of which they are the result. If an answer be correct at all, the teacher should not absolutely reject it. It may not be worth while to extract the grain of truth that is in it; but, in declining it, he should let the pupil feel that he is so far pleased, which will encourage further attempts. If it is fairly correct, he should get the truth separated from the error, and the process of thought that led to it amended or enlarged, if possible by the pupil himself, if not, then by others: further questioning upon the answer given will generally secure one or other of these results.

An answer may be entirely wrong, and yet have the merit of being thoughtful: this should be acknowledged. Such answers are often most profitable for instruction, suggesting new lines of thought on the subject of the lesson which would not occur to the teacher himself, and giving the best opportunities of correcting defects in the pupil's reasoning. The teacher should hold himself ready to follow them up. Really good answers should receive a special word of commendation. On the contrary, flippant answers, given at random, showing gross inattention and even a studious thoughtlessness, should not be simply passed by, but seriously repressed. If they are tolerated at all, they have a strong tendency to multiply: they should be dealt with, therefore, as offences against the character of the class. In a well-trained class, the desire to do their best will be so strongly felt by the pupils as to make such answers of comparatively rare occurrence.

267. Correction of Errors.—It is most important that the teacher should be at pains in correcting the errors made by his pupils. One of his greatest difficulties in conducting instruction is to direct his efforts so as to meet their precise wants: so that at the best a considerable portion of his labour, 'like the friction of machinery,' runs to waste. The errors which occur are like sign-posts to point him on his way. They show where some principle has not been apprehended, or where memory has relaxed her hold: here at least he is certain of his mark. The trouble which

he takes in correcting them is labour from which nothing has to be discounted as loss; because there need be no doubt of its securing its object, and because, moreover, the pupil who commits error is in a state of mind most favourable to the permanence of its results.

Yet it is certain that a great deal of correction is made in vain. It is not always enough for the teacher to state the correction once himself, or get it stated by another pupil. Unless a sense of error be felt by him who has made it, there can be no thorough correction. The error should therefore be emphatically pointed out; and the correction, whether made by the teacher or by the class, should be repeated as often as necessary by the pupil himself. Generally speaking, error is the result of habit or of some strong prejudice; anything short of this emphatic process will therefore probably fail to guard against its repetition. But this is not all that is required. The error made by one would probably be made by others if they had the opportunity. The teacher is concerned therefore to make his correction effectual, not for the one alone, but for the whole. He should not neglect to require the correction to be repeated by various members of the class, and at his discretion by the whole simultaneously.

So much time is lost, and so much bad feeling engendered, by imperfect correction of errors, that he can hardly be too particular in this part of his work. Whatever is worth correcting at all, is worth correcting well.

268. Facility of correct Expression.—The language used by the teacher is not only the medium by which he conveys his instructions to his class, it is also an example which he holds out for their imitation to guide them in acquiring the power of discourse. Both of these are objects of equal importance: his success depends in a double sense, therefore, on the character of his language. The qualifications which he should have in respect of language are the facility of correct expression, and the power of adapting his expression to the circumstances of his pupils.

His language should be correct in *pronunciation*, not simply in the reading-lesson when he is formally teaching this matter, but in all his lessons alike: it is by his ordinary pronunciation, and not by that which he assumes for a special purpose, that theirs will be formed. His language should be correct in *grammar*:

for they learn to speak grammatically not by rule but by imitation. And it should be correct in *expression:* avoiding colloquial and vulgar phraseology. Error in this respect is commonly committed under the idea of thereby attaining greater familiarity of language. This is bad policy, even supposing it successful. It will inculcate errors which can hardly be eradicated after they have became habitual. The teacher should strive from the first to raise his pupils to his level in correctness of expression, instead of himself descending to theirs.

A ready command of correct expression is a necessary qualification to the successful teacher. He needs to present the same topics in different lights according to the different capacities of his pupils, and according to the purpose of his lesson. So many depend on active contact with his mind for their being kept attentive and for their understanding of the subject, that only the greatest readiness of address will serve his purpose. Slowness or hesitancy will inevitably break down their interest.

Copiousness, however, should not run out into redundancy. To talk too much is as great a fault in the teacher as to talk too little: it is as great an impediment to mental activity, though in a different way. The teacher naturally desires to make his exposition as plain as possible, but there are two considerations which he should bear in mind:—(1.) It is not desirable, even were it possible, to explain gratuitously everything that occurs down to its very simplest elements. The mind even of a child does not require, or wish, to be so entirely relieved of effort; it will supply many things for itself: nay, that is great part of its pleasure in learning.—(2.) Beyond a certain limit, language only confuses instead of illustrating. Incessant talking shifts the point of view for the class so frequently that they cannot obtain a clear steady view of the subject from any one point. Let the teacher therefore determine with himself beforehand the particular topics to be explained, and fix in a general way how much it is proper to say on each. It may be that the class may not comprehend him after the clearest explanation; for which the remedy is not additional explanation but patience, which will leave them to revolve the matter by themselves for a little with the intention of returning to it afterwards.

The great cause of redundancy is want of precision. When the

teacher is conscious that he has not said what he intended to say, it is almost inevitable, as indeed it is natural, that he should go over it again in the hope of amendment. But suppose he succeeds in amending his statement, the previous imperfect statement remains as an obstacle to the effect of the amended one. Only when he uses language which conveys neither more nor less than he means to convey, can he afford to dispense with this unsatisfactory verbal repetition.

269. Judicious choice of Language.—We cannot speak intelligibly of the characteristics of the language which should be used in teaching children, without reference to the nature of the subjects of which the language treats. Children acquire language by hearing it used in connexion with things which fall under their senses: were they to hear nothing but discourse about abstract and invisible things, they would never acquire language at all. Its adaptation to their comprehension depends in the first place, therefore, on the adaptation of subject. And in speaking of the kind of language the teacher should employ, we shall assume this adaptation of subject; apart from which any rules that might be laid down would be of small moment.

If we may judge from the practice of schools, the fact is not uncommonly overlooked that children do not acquire language through the study of words, but a knowledge of words through familiarity with language; that they learn the parts from the whole, not the whole from the parts; that the process is an analytic, not a synthetic one. The prevalent idea is that no words should be used till they have been explained; which, if it were not simply impossible, would entirely prevent the acquisition of language. The use of words is gradually learnt by an inference of their meaning from hearing them applied to subjects within comprehension, and in an intelligible and suggestive connexion: the position of the word suggesting the idea to the child, and being then connected by himself with the word. No other process but one of active self-inference could give the child that thorough and instantaneous command over the words of a language, which is essential to any effective use of it. The rule that is given therefore to the effect that no strange words shall be used is quite unphilosophical.

"We cannot wish," says the author of *Home Education*, "to see poetry [or any kind of discourse] for children broken down into monosyllables, or confined to the range of the nursery vocabulary. The wealth and compass of a language is to be acquired, not by fingering a dictionary, or by committing definitions of words to memory; but by the gradual extension of that unconscious process which goes on whenever words, in their true and infinitely varied connexions, are presented to the mind, and are heard, a first, a second, and a third time; yet are not understood until, by little and little, a meaning, more and more precise, clusters about the sound. Some teachers exhibit a needless alarm, lest, in what a child reads or commits to memory, there should occur any words to which he attaches no meaning, or a wrong one. But what, we may ask, is the mischief that ensues in any such instance? Is the circumstance of his not understanding a particular term which he has happened to hear or to read, any greater harm than his knowing nothing, at present, of the thousands of words which do not come in his way? Or if we think of the single passage in which some such unknown word occurs, it does not always follow that no meaning will have been gathered from it, from want of the unknown word; and, besides, the understanding of a sentence or paragraph implies much more than the ability to tell what each separate word means; so that the error or the deficiency, in regard to one or two words, will often be found to bear a small proportion to the general confusion or misapprehension that attaches to the structure of a sentence, or to the dependence of ideas through a paragraph. An unknown word in a sentence is like a shadow in a landscape;—just on that spot the eye discriminates nothing: but many a sentence, the meaning of every single word of which a child can give you, is to him as dim as twilight, or absolutely dark as night. Words learned in the first instance by means of formal explanations are found to be peculiarly liable to ambiguities of apprehension, or to be substituted one for another; and they continue to be the last words in the language that promptly and appropriately occur, when wanted in extemporaneous discourse. Poetry [or discourse] for children should be freely sprinkled with long words and with words of less frequent occurrence. What we have more to guard against than hard words, or than tropes or bold metaphors (which children often catch with ease and delight) are, either sentiments of a kind with which they can have no sympathy, or notions and modes of expression that are abstruse and philosophical."

To the same purpose says Abbott, with his usual practical insight, "Make no effort to simplify language. Children always observe this, and are always displeased with it, unless they are very young; and it is not necessary. They can understand ordinary language well enough if the *subject* is within their comprehension, and treated in a manner adapted to their powers. If you doubt whether children can understand language, tell such a story as this with ardour of tone and proper gesticulation, to a child only two or three years old:—'I saw an enormous dog in the street the other day. He was

sauntering along slowly, until he saw a huge piece of meat lying on the ground. He grasped it instantly within his teeth and ran away with all speed, until he disappeared round a corner, so that I could see him no more.' In such a description there is a large number of words which such a child would not understand, if they stood alone, but the whole description would be perfectly intelligible. The reason is, the *subject* is simple; the facts are such as a very little child would be interested in; and the connexion of each new word, in almost every instance, explains its meaning. That is the way in which children learn all language. They learn the meaning of words not by definitions, but by their connexion in the sentences in which they hear them; and by long practice they acquire an astonishing facility of doing this. It is true they mistake sometimes, but not often."

The teacher is not to suppose from all this that he is free to introduce into his class-conversation any kind of words that occur to him. The substance of what has been said is this: that, provided the subject be intelligible and the structure of his language suitable to the capacity of his pupils, he need not go out of his way to avoid long words, since their apprehension of the sense of the whole sentence will direct them to the sense of the particular word. They *feel* the idea which it must denote, so to speak, and they connect it accordingly with its sign. At the same time this is not to preclude him from offering explanation of any special words that seem to call for it: this will often be necessary. But on the other hand, if the teacher's language is not clear to them in its general connexion, they cannot fail to make the most extraordinary mistakes as to the sense of individual words. Let him remember then, that the character of his language is to be judged, not by the simplicity of its single words, but by simplicity of structure as a whole.

The false rule, 'That words should not be used till they have been explained,' probably arises from a misunderstanding of the educative purpose which language is made to serve in the child's early oral instruction (§ 88). He is led to observe the qualities of things, and then to express these in their appropriate terms; so that he comes to a knowledge of terms after verifying the ideas they denote. This is a valuable and necessary part of the child's intellectual education, having for its design to exercise his conceptive faculty, and it continues to be kept in view during his whole attendance at school; but its principle is something quite different from what we are here considering, viz., the principle on

which the teacher should address the child so as to develop his power of language, and to convey to him general information.

270. Good Utterance.—The first requisite of the teacher's utterance is *distinctness*. This a valuable quality, for two reasons. The one is, that upon it depends greatly the style of articulation which the pupils will acquire. We are apt to suppose that it is peculiar to the reading-lesson to insist on distinctness, and that if there insisted on, it will show itself in all the lessons of the school. This however is an erroneous view. The character of the child's utterance is a habit, which will be determined according to the style to which he is most accustomed, that is, the conversational style of the teacher. So far from his acquiring distinct speaking through distinct reading, the reverse is the truth. If he is to read distinctly, it must be through speaking distinctly; since he has much more practice in speaking than in reading. It will be found, then, that according as the teacher's ordinary utterance is distinct or not, so will the pupil's be, whether in reading or speaking. The other reason for distinctness is, that it greatly heightens the impressiveness of teaching. There is something in it which tells at once of authority, decision, and clearness of knowledge, and which carries home with force to the pupil's mind all that is uttered.—The second requisite in utterance is *a proper tone of voice*. If the teacher speaks in a low tone, there is the obvious danger that all the pupils will not hear what he says, and the certainty that they will follow his example; so that much of the lesson will be lost to the class as a whole. When a class speaks low, it may be generally set down to some fault in the teacher's utterance or manner. But on the other hand, he may speak too loud, causing unpleasant and unnecessary noise throughout the school, where several classes may be going on simultaneously.

271. A good Manner in Teaching.—Every one is sensible of the influence of a good manner: how it gives impressiveness to narrative; how it sets forth arguments, and colours description; how largely, in a word, it enters into the power of persuasion. Children are very susceptible of this influence; so that it becomes important to observe what are the elements of a good manner in teaching.

The foundation of a good manner is good temper ; which exhibits itself in cheerfulness under all circumstances of work, and in patience with the wayward and the dull. These qualities give the pupils confidence in their teacher, keep them pleased with their work, and inspire them with the desire to do well ; a disposition which is almost a guarantee of successful instruction. Whereas moroseness and fretfulness on the part of the teacher beget the same in the pupil ; a cold and unsympathetic manner disheartens them in their endeavours ; and anger, by filling them with fear, incapacitates them for doing or saying what is quite within their power. If the peculiar virtue of a good manner is to win the pupils to their work, then a manner characterized by these qualities is bad in the fullest sense of the word.

Successful teaching requires perfect self-possession and readiness of resource. He who does not feel confidence in himself cannot expect that others should feel confidence in him : and the absence of this feeling infallibly betrays itself by look or expression, even to young children. There is a lower degree of self-possession which it is comparatively easy to attain ; that, namely, which enables a teacher to proceed with his lesson according to a prepared plan, when no interruption occurs either from within the class or from without. This is not sufficient ; he is, in such circumstances, the slave of his preparation and not its master. He must be independent of interruption ; able at any moment to stop, retrace his steps, diverge from his path to seize upon any illustration which occurs to him by the way, and resume the thread of the lesson at the point at which he laid it down. In particular, as we have already seen, he must be prepared for all possible answers from his class, and ready to turn them to account. Nothing but practice in his art can give him this ready tact ; the young teacher will find careful preparation greatly facilitate his acquisition of it.

Animation or vivacity of manner is indispensable in dealing with those who are by nature lively, as children are. This habit does not consist of a display of mere physical activity ; there may be a noisy bustling manner, and a loud tone of voice, without any real vivacity ; still we can hardly conceive of it apart from a certain degree of outward energy as its exponent. It is true that one may gain the attention of a class by a calm and sedate

manner ; but we seldom find a teacher entering into his subject and teaching it with his whole heart, whose earnestness does not ally itself to a sympathetic tone and gesture.

The teacher's manner should be decided and authoritative. Whilst he should mainly depend on the interest of his lesson and the cheerfulness of his manner to win the attention of his pupils, authority is the ultimate basis of his influence. He must appear to them not as one beseeching, but as one having the power to exact, their interest. He should distinguish, however, between having this authority and constantly bringing it into view ; if he has it, it will make itself felt, and will not therefore need to be much talked of. That it may be fairly exercised, he should make them well understand the mode in which he wishes them to take their part in every kind of lesson.

Finally, his manner must be becoming. Animation and liveliness are quite compatible with propriety ; and, as he would wish his pupils to avoid all attitudes and gestures that are slovenly or unbecoming, he must himself be careful to set them a good example. He may be unaffected and even familiar without renouncing the dignity of his position.

272. On Impressiveness in Teaching.—'A lesson is not given until it is received :' that is to say, the teacher's work is not finished till, besides delivering himself of the lesson which he has prepared, he has ascertained that his pupils have thoroughly appropriated its substance to themselves. We may therefore accept, as the ultimate test of a lesson :—How much of it is the class likely to carry away ? The amount will depend on the combined exercise of intelligence and of memory to which they have been subjected ; so that by this simple test we can satisfactorily estimate both the 'educative' and the 'instructive' results of the lesson.

Good and intelligent teachers sometimes fail to make their lesson a permanent possession of the class : very much because of their own intelligence, and of their anxiety to cultivate the intelligence of their pupils. They carefully plough the soil, and sow the seed ; but the promise of an abundant return is not realized. The class, which has been under wholesome mental discipline, and has shown signs of full mental activity, belies its character, when taken over the ground of its previous studies with the view of testing its positive knowledge. A result

like this is easily explained : it is not that intelligent teaching is unfavourable to memory, but that memory has its own distinctive work to perform under its own distinctive laws (§ 96). The process of teaching will be found on examination to have been left incomplete : intelligence has been expected to do the work of memory, whereas the memory should have been appealed to under the conditions of its own peculiar activity : instruction has been communicated, but not impressed.

The first condition of the pupil's retaining what is addressed to him is that the teacher shall communicate the instruction distinctly and impressively.

All that has been said in this chapter on the art of teaching bears upon the method of doing this. He must be judicious in limiting the amount of information he attempts to impart at one time ; must arrange it clearly and in a method suitable to the standing of the class ; must illustrate it well ; must stir up their activity by well-constructed questioning ; must clothe his ideas in perspicuous and expressive language ; and must commend his instruction to his class by an attractive and powerful manner of personal address. There are two features of teaching, however, which require to be specially noticed with a view to impressiveness.

The one is that the several topics introduced in course of the lesson must be dwelt on for a sufficient time, and presented with a sufficient amplitude, to enable the pupil to apprehend them. Many young teachers seem to touch on their topics only for the purpose of leaving them ; sometimes even the leading divisions of the lesson are treated in this hasty, abrupt manner ; so that, instead of each standing forth distinct from the others, they are as it were fused into one shapeless mass. It serves no purpose in teaching to refer to things in this cursory manner ; nothing, indeed, puzzles a child more. When a topic is introduced, his mind settles down upon it with the expectation of having it wrought out. Unless he is distinctly conscious when the teacher is about to make an advance, he will remain behind ; and, accordingly, every one has noticed that when a skip has been made, the answers given immediately thereafter have reference to the previous stage of the lesson, showing that he has not accompanied the teacher. It is possible for the teacher who is given to this habit

to have come to the end even of an orderly and well-constructed lesson, without the class having got so much as one glimpse of the subject. Whatever he is not prepared to illustrate with some patience, he had better not introduce at all. There is no chance of its being understood or remembered; so far from that, the class will infer, from the manner in which it is adverted to, that he does not think the point of much consequence. The weakness and inertia of the child's mind, then, require that each step in a lesson be emphatically dwelt upon and wrought out to a definite conclusion.

The second condition of impressive teaching is that repetition shall be judiciously employed as the lesson advances.

Repetition of a statement made by the teacher, or of a fact given by themselves, may often be required in the precise words in which it has been brought under the notice of the class. We have already had occasion to observe, that simultaneous enunciation is an effective instrument for impressing on a class any statement or fact which is in its nature definite. Indirect repetition, however, contributes on the whole more to the impressiveness of teaching than direct; because it involves a higher degree of mental activity on the part of the class. All the important topics of the lesson must be repeated in this way: those which are 'questioned in' to a pupil from one point of view must be 'questioned out' of him, or some one else, from another. This secures that they not only pass through his mind, but that they are digested. No inconsiderable part of the mental discipline of a class depends on the use of this indirect repetition.

273. **Recapitulation.**—Besides the repetition which accompanies the act of communication, impressiveness of teaching further requires recapitulation at the end of the lesson: or the summing up the leading points, and presenting them to the class in such a way as to leave with them a connected outline of the whole. This aids the memory, not merely by a mechanical, but by a logical process: for the result is not only to give prominence to the leading points themselves, but to make these as it were pegs whereon the mind may hang the more detailed information that has been given under each. We might add that recapitulation, if it were not valuable for the purpose of impression, would still have sufficient value as an exercise of intelligence to induce its

practice; for it cannot fail to accustom the pupil to discriminate what is of primary importance from what is of secondary, propositions from arguments, the things illustrated from their illustration.

If it be necessary to recapitulate the topics of a single lesson, it cannot be less so to recapitulate, as necessity requires, the substance of a course of lessons. The teacher has not only to explain, but to impress; not only to impress at the time, but to make the results of his instruction fixed and familiar to the pupil, so that what he communicates to-day shall not be driven out of mind by what he communicates to-morrow. To a certain extent this review of past work is a mechanical process; but it cannot be dispensed with: in fact, the essentials of the pupil's elementary knowledge must be lodged in his mind by the same frequency of repetition as that by which he acquires any habit of *action*. Certainly not less than half of the whole school-time is occupied in the work of revisal.

This iteration of what has already been set before the class may appear at first view to be tedious and repulsive. But it does not need to be so, and the teacher who is skilful, or even ordinarily reflective, in his art will prevent it from being so. In the first place the young mind has so strong a desire for activity that it can bear considerable repetition even of the same process without fatigue, if lightened by the sympathy and encouragement of the teacher. But, secondly, so many various modes of revisal may be contrived that each may have the effect of a new process of instruction: so that there is no excuse for its being wearisome. Thus, in addition to various forms of oral revisal, the black-board may be turned to account as effectively for revisal, as we have seen it may be for illustration; provided the teacher have facility in setting down upon it expeditiously and neatly the principal points which are brought under review. Or the class may be subjected to written answering for this purpose in school: or may be required to bring to the teacher the heads of instruction as an exercise performed at home. The variety of resource open to the teacher has already been adverted to in speaking of modes of examination.

274. Economy of Time in Teaching.—Time is not the first consideration in the art of teaching. The quality of the instruc

tion must be studied before the amount: how little soever the teacher does, he must do it thoroughly. But when the artist has acquired the use of his tools and can perform satisfactory work with them, it becomes an object with him to produce the greatest result attainable in a given time. So should it be in teaching. The time of the school is a very precious possession. So many have an interest in it and there is so much work to be done, that with the utmost economy it is all too little for its purpose. The teacher should therefore study to save it in every possible way: in his organization, by keeping his classes constantly employed, and in his method of teaching. Various expedients good in themselves are entirely excluded by this consideration: and he must rigidly examine those which he adopts. He must not loiter by the way; delaying on unessential points, accumulating illustration beyond what is needed, diverging into bye-paths leading out of his main track, extracting results from the pupils by extravagant circumlocutions and repetitions, teaching from imperfect knowledge, pausing between his questions, and disposing of his pupils' answers in a dilatory manner. As soon as he has learnt to teach well, he should set himself to study and practise the art of teaching in a business-like expeditious way. And to the test already recommended, viz., what are the class likely to carry away from the lesson? he should add this other, has the time at command for the lesson been well used?

275. **Natural Qualifications for Teaching.**—The practice of all good teachers, though showing great differences in the choice of expedients, will be found to agree in illustrating the rules and principles which have now been enforced: for these are of universal application, being suggested immediately by the constitution of the pupil's mind. The careful study of these will therefore, it may be assumed, guide the intelligent student of teaching to earlier success than he would otherwise attain, and to the more profitable accumulation of the fruits of his experience. But we cannot promise him that this alone will insure him success. There are certain natural qualifications which he must bring to his profession, without which he must be content with moderate results to his labour.

The temperament of the successful teacher shows pre-eminently two elements, sympathy with the minds of children, and energy

of personal character. The former enables him to enter into the thoughts and feelings of his pupils, suggests to him the various means of adapting himself to their requirements, and binds him to his work by strong natural likings. The other is the source of that enthusiasm or 'force' in his work which gives him an unquestioned power to influence their intellectual and moral dispositions.

Nature has bestowed these gifts, as she has bestowed all others, in different degrees on different men, thereby fitting some better than others for engaging in the work of instruction; but, in whatsoever measure they are bestowed, they may be increased in the case of all who with intelligent and resolute purpose keep in view their own self-education.

The natural qualifications necessary to enable him to give effect to his *discipline* and to influence the *character* of his pupils have been already adverted to. (§§ 27, 203.)[1]

[1] *Dick Bequest Report* 1854, chap. xv.

PART III.

METHOD.

CHAPTER I.—READING.

276. Theory of Reading.—The process of learning to read should be viewed as one of learning to recognise in written signs words which are already familiar to the learner in spoken language; so that for the retaining of the words he may be able to depend, not on his memory of their forms and sounds alone, but on that of their sense, with its stronger and more interesting associations.

To carry out this theory of reading, the following conditions of method must be observed :—(1.) He should not begin reading till he has made considerable progress in spoken language; both in a knowledge of its vocabulary and in the power of enunciating its sounds. Imitation and practice within the family-circle should have taught him the names of the commonest objects, qualities, and actions; and have formed his organs of voice to the utterance of all the elementary sounds. It is not part of the process of teaching reading, strictly considered, to teach these sounds; though in point of fact it has to occupy itself with the correction of such errors in utterance as occur. If the family-circle fail in giving this knowledge, the defect must be supplied, as far as practicable, by conversational lessons from the teacher. And the younger the child is when he comes to school, the longer is the period that must be given to these lessons before the task of reading is commenced.—(2.) The first reading-lessons should deal with familiar objects or actions, like those of which the child has experience; as his knowledge of the subject will facilitate his acquisition of the words, and the words themselves will be of a class with whose use he is acquainted.—(3.) The reading-lessons should from the first consist of sentences. It is of these that spoken language is composed; and in these alone is there a sense

for him to comprehend. Detached words or phrases do not make good lessons ; and much less do parts of words, which have no meaning at all.—(4.) The reading-lessons should be preceded by a short conversation between teacher and pupil, to give the latter an idea of the subject, to introduce to his notice the principal words he will meet with, and in particular to fix his attention on any words that may be new to him. It is better to make these part of his vocabulary before he meets them in reading, than simply to explain them after he has met them.[1]

277. The Learning of the Signs.—The recognition of words in written signs implies two things :—(1.) The recognition of the signs which stand for the words, and (2.) The association of the sounds of the words with their signs.

In teaching the signs the teacher's object is to make the eye of the pupil familiar with the sign of each word in the language, so that each word shall have its distinctive picture. But as all word-signs are reducible to a few elements and differ only in the order in which these are arranged, the rational way of attaining the object in view seems to be to make him familiar in the first instance with these elements ; that is, with the alphabetic characters. To the two kinds of preparation for reading already mentioned, therefore, must be added a third, instruction in the forms of these characters. The proper mode of giving such instruction hardly admits of dispute. In all study of form the eye must observe and the hand reproduce ; the one process gives knowledge, the other tests it. So here the eye of the pupil must trace the forms of the characters under the teacher's guidance, and his hand must then imitate them by drawing on his slate. In this preliminary step the different methods of teaching reading all agree.

278. Association of Sound with Sign—Alphabetic Method.—In teaching the sounds of words the teacher's object is to get the learner so to associate each word-sign with its sound, that the one shall instantaneously suggest the other. It is in answering the question how this is to be done, that the different reading-methods take their rise. Of these there are three to be distinguished :—(1.) The Alphabetic Method ; (2.) The Phonic ; and (3.) The method of 'Reading without Spelling.'

[1] Pillans' *Principles of Elementary Teaching.*

The first of these methods—and the one in common use—is called the Alphabetic, because it associates the sound of a word with its sign through the medium of the series of its letter-names, taken either collectively or syllabically. This evidently is not, and is not designed to be, a reading-method alone; but a method for teaching reading and spelling simultaneously, and the reading through the spelling. That these branches should be taught together is obvious, since the labour requisite for learning the one may all be made available for learning the other. The objection to this method is, not that it combines the two, but that it does so in an unnatural and awkward manner; so that instead of helping, they interfere with, each other. Spelling rests on a habit of the eye, which is best acquired as the result of reading; this method, which inverts their proper relation, not only deprives the learner of the natural facilities which reading gives for spelling, but distracts his attention from the one thing with which he is supposed to be occupied, the reading. Such is the real objection to the alphabetic method; and not, as is generally assumed, the want of correspondence between the aggregate of the sounds of the letter-names and the sound of the word itself. It is quite true that 'aitch-oh-you-ess-ee' cannot phonically suggest the sound of the word 'house;' but there is no reason to suppose that the method alleges any such connexion. It does not pretend to be a phonic method: when it takes the spelling of words along with their sounds, its object is simply that the spelling may be learnt along with the reading. If the spelling of a word does, after a while, suggest its sound, this is not on any principle of logical connexion, but only on that of frequent juxtaposition; a principle which will make the most arbitrary association suggestive. Very much of the argument against the common method has proceeded on the false assumption that the letter-*names* of a word and its sound are set forth in the relation of phonic parts to their whole; and has therefore not touched the merits of the question.[1]

279. Phonic Method.—The second method is that which associates the sound of the word with the letter-*sounds* composing it; and is known as the Phonic Method. If we suppose the letter-*sounds* or *powers* to be substituted for the letter-*names* in

[1] Dr. Bell's *Manual;* Wood's *Sessional School*, chaps. xi. xii. xiv.; *Min. Counc.* 1844, vol. ii. pp. 340-342; also reference under following section.

the common method, we shall have a sufficiently exact idea of the phonic. Only we must allow to it the two conditions which it claims as necessary for its efficient working: on the one hand, it does not subject to phonic analysis those monosyllabic words which the child has occasion to learn first, because they are for the most part anomalous in their sounds; and, on the other, when it does enter upon analysis, it groups the words of the language according to the vowel or diphthong sounds which they embody, that the learner may have all the help which results from classification. The method is liable to objection from three points of view.—(1.) Any classification of the elementary sounds of words in connexion with their signs is, in the English language, exceedingly complex, and, with all its complexity, quite inadequate to meet the requirements of the case. Thus we find one letter-sign denoting two or more sounds; two letter-signs denoting the same sound; letter-signs not sounded at all; and two or more letter-signs denoting between them but one sound. And even when rules have been multiplied to the utmost, it is no small part of the language which still lies beyond their application. In a language like the German, whose phonic structure is regular, this objection does not hold; which may explain why this method has been particularly advocated in that language.—(2.) But to the extent to which the alphabet is regular, the method is liable to an objection of the same nature as that so often urged against the common method, viz., that the aggregate of the sounds of the letters in a word does not naturally suggest the sound of the word itself: an objection which, though not of much weight as against a method not pretending to be phonic, is fatal in the case of one which does. According to the method in question, the pupil is expected to arrive at the sound of the word *bat*, for example, through this analysis bĕ-a-tĕ (the two consonants being uttered upon a sound here denoted by ĕ, but which is in reality something like the sound of the *e* in French, or the *u* in *but*). This threefold sound may be a nearer approach to the single sound of *bat*, than the threefold beē-ā-teē of the alphabetic method; but it certainly does not constitute that sound. In fact it cannot: in the very first step of its attempt, it gives a distinct sound to the consonant *b*, a letter whose essential feature is that by itself it has no sound at all. Consonants contrast with

vowels in this, that apart from vowels they cannot in the general case be sounded; certainly the sounds which they are made to have when uttered by themselves do not occur in the language. It may be said that the sounds attached to the consonants in this method are so slight as to be no obstacle to the child in reaching the word-sound through their combination; but experience seems to lead to a different conclusion. The child fails to reach it in that way; in point of fact, he requires to be told the sound of the word as a whole, and the power of reading which he acquires as he goes on comes to him in virtue of the silent induction upon the sounds of words and their parts, which he carries on for himself from the beginning.—(3.) Granting that the method were free from this objection, there is another which lies against its whole principle. It does not follow that, because the words of a language may have their sounds analysed and classified, the way to learn to read lies through this analysis and classification. Whether it does or not depends on the mental circumstances of the learner. An advanced pupil with some power of generalization may find it the shortest and most satisfactory way for him. The natural way for the child to learn language, or anything else, is to begin with wholes, as alone giving him ideas which his mind can apprehend, and from wholes to proceed to their parts. For a part, unless it is contemplated by him after, and in connexion with, the whole to which it belongs, has no meaning for him; and, so far as it can be said to be learnt at all, can only be learnt mechanically. At this point in his progress such a classification of sounds rather oppresses than aids him. There is a way in which phonic comparison may be of service to him, but it is not in this synthetic way.[1]

280. Phonetic Method.—In connexion with the Phonic Method may be mentioned another which is in some sort a logical consequence of it. To obviate the difficulty felt by the learner from the irregularity of the sounds in English words, the phonetic method (as it is called) employs for a time a different alphabet, in which the characters are sufficiently numerous to denote all the sounds of the language, and have a uniform power. The

[1] *Min. Counc.* 1844, Minute on Methods of Teaching, 1845, vol. ii. pp. 231-34; *Phonic Manual* of Committee of Council; Dunning *On the Phonic System of Teaching to Read*; *Quart. Journ. Educ.*, Nos. ii. and xi.

reading-lessons are all written in these characters, until the child acquires the habit of regularly associating the sound of each letter with the sign of it. The transition is made to the common alphabetic characters by giving him the same primers to read in them, as he has already been reading in the phonetic characters. Such a method is evidently liable to the same objection to its principle as has been urged against the phonic: whilst its peculiarity in using new characters has difficulties special to itself. (1.) The irregularities of sound in the language as it is written are not surmounted by such a contrivance, but only delayed. (2.) Such a method, to be introduced at all, would require to be introduced universally: for it is incompatible with the ordinary methods, and a pupil changing from one to another with change of school would find his previous acquisition, not only useless to him, but an actual obstacle to further progress.

The same objections may be urged, with more or less force, against the modifications of this method which have been proposed: in which it is hoped to obtain the supposed advantages of the method without its peculiar defect. One for instance uses a series of marks to denote the powers of the various letters in all the circumstances in which they occur; thus "Fėbruarў ïs cold, but thė dayṣ arę lông:' whilst another seeks the same end by the mode of printing the characters, thus 'go, do^{e}, blo^{w}, tho^{ugh}, ro^{a}r.'[1]

281. Reading without Spelling.—The third method is that which associates the sound of the word directly with the form of the word as a whole; whence it is known as the method of 'Reading without Spelling,' and sometimes as the 'Look-and-Say' method. Its analogy to the method by which the child learns spoken language is strong evidence in its favour. In acquiring speech his ear catches the sounds of words as wholes, and associates the sense with them without any analysis: so in reading should the sound and sense of words be associated with their forms as wholes, without any analysis for that purpose. The eye does in the latter with the forms what the ear does in the former with the sounds. In both the learner is immediately in contact with words and with the ideas they denote; and it is in association with these ideas that the words are best kept in his mind. A mechanical agency for this purpose is unnecessary; nay, prejudi-

[1] *Min. Counc.*, 1854, pp. 346-7; Edgeworth's *Practical Education*, chap. ii. 'On Tasks.'

cial, because it disturbs him in making this vital association, in virtue of which alone he knows the word. But granting that he may acquire words in this way, how, it may be asked, does it enable him to make out new words, in which the power of reading really consists? There are two considerations to be taken into account in answering this question. The *first* is that, whilst the method seems to be simply 'look-and-say' as far as the teacher is concerned, it is much more to the learner. The teacher may advert to no principle of sound, and institute no comparison, but the learner does both for himself. The child neither can nor should have everything done for him; he carries on this induction for himself spontaneously, it may be unconsciously. The association of sound with sign which he makes in one word, he endeavours to apply in any other word which gives him opportunity: it is impossible for any one to doubt this, who has narrowly watched the early steps of a child in reading. In estimating this method, therefore, we are to bear in mind this instinctive phonic induction which he invariably makes for himself, and for which it allows him full room. The *second* consideration is that the teacher may aid this induction and confirm its results; and yet in a manner not to interfere with the spontaneous action which should be preserved for it. Thus after a lesson has been read containing certain words which resemble each other in sound, the teacher may direct the child's attention explicitly to their resemblance, by singling them out from the lesson, and even separating them into their parts so as to show in what the resemblance precisely lies, and in what the difference. This is phonic comparison, but it is a process very different from that contemplated in the 'phonic method:' because it is only guiding the pupil in a natural exercise of observation on the words he has read with the view of more effectively securing its results, and not giving him certain technical sounds which he must combine artificially in order to be able to read at all. In estimating this method of reading, therefore, we must allow for the explicit use of phonic comparison in this way, as well as for that which the child will make for himself whether the teacher seek to aid him in it or not.[1]

[1] *Quart. Journ. Educ.*, No. xiv.—Central Society of Education's third volume—Baker's Manuals of Reading.

The three methods which have been described differ only in the manner in which they make the association between sound and sign. Each may carry with it all the advantages of the principle that the acquisition of both sound and sign should be based on a perception of the sense, and may comply with all the conditions imposed by that principle. And it is a much more important question regarding any method whether it does this or not, than whether it follow the alphabetic, phonic, or 'look-and-say' manner of associating sound with sign: inasmuch as the degree of intelligence and interest thrown around a process must always be of more importance than its mere technical propriety. Assuming that this is duly felt, the method we propose to recommend is that of 'reading without spelling;' preceded by oral instruction in the use of words and in the forms of the letters, and supplemented after a time by a certain kind of phonic comparison.[1]

This method is not only the best in itself, but it is free from the objections commonly raised by parents and others against the phonic; whilst it may be adopted in any school without prejudice to the pupil's progress on account of his having previously followed the common method.

282. Order of Instruction.—The order and nature of the steps by which it proceeds may now be minutely specified:—

The Alphabet.—The alphabet, both of small and capital letters, should be learned as soon as the pupil comes to school. In dealing with the letters the teacher should group together those which are formed of the same elements: thus b and d, p and q, m and n, v and w, o and c, and e and c. He should trace each gradually on the board, and give a short oral lesson on its construction and on the difference between any two of the same group. When the pupils have received some practice in drawing the elementary forms, such as straight lines in different positions, the hook, the circle, oval, etc., the teacher should require them to draw the letters repeatedly on the slate, both from copy and from memory. Each letter should be named at the time it is taught; not for any direct use to which the names are to be put in reading, but just because the letters have to be frequently spoken of, and their names will be required in a short time for spelling. This instruction in *form* may be given twice daily with a view to quick progress: the child

[1] This method has sometimes been designated, from the manner in which it introduces the analysis of word-sounds, the 'Phonic Analytic;' but it is not to be confounded with the 'Phonic Method' on that account. The above name is preferable, as tending to avoid confusion.

takes pleasure in it, as it appeals to a faculty which is very active at this period. His knowledge of the alphabet may be further impressed by requiring him to name and to point out the letters in any order on a diagram: or by the use of a box of letter-cards, with which he may be exercised in various ways according to the ingenuity of the teacher.[1]

First Step in Reading.—The apparatus for the child's first step in reading is a series of tablet-lessons, or a primer of sufficient size to be used as such. Each lesson should contain but few words, printed in large type; that the pupil's eye may not be distracted by a multitude of characters. It is easy for the teacher who uses this apparatus to sustain the attention of the whole class. Suppose that the first lesson contains the sentences:

I am up
he is up
we go up

The teacher points to and utters each word successively in the first sentence, and has it uttered by the pupils both simultaneously and individually; then the sentence as a whole similarly uttered. The other two sentences are treated in the same way. When the pupils can read the sentences as they stand, the teacher selects words from the page in different orders, but always so as to form sentences: this will show whether they know the words, or have been merely repeating them from memory. The other lessons in the step are taught in the same way. Each may be concluded with a slate exercise, in which the class writes down the sentences printed in the lesson.

Second Step.—The apparatus for this step is a series of tablet-lessons also, but of a different sort from the former. Each lesson should now contain a larger number of words, arranged in sentences so as to form a short paragraph, but printed in smaller type, and presenting more to the eye at once, so as to make a greater demand on the pupil's power of attention. It should contain, along with words which he has read before, some new words which rhyme together. These should be placed in column at the head of the lesson that the teacher may see what words occur in the lesson with which the class may not be quite familiar, and introduce them into the conversation which he has with them on the subject of the lesson before the reading is commenced. Suppose that one lesson is as follows:[2]—

-at p-at
b-at s-at
f-at c-at

my cat sat on the mat.
he is fat, fat, I am to pat my cat that is so fat, etc.

The teacher points to the words of the sentences in their order, expecting the class to be able to name those which have occurred in previous lessons: any new word he tells them when it occurs without requiring or allowing them to spell it: this does nothing to help them to the word, and is therefore a mere interference with their reading: they may even fall into the habit of indolently spelling words which they know quite well, to save themselves the trouble of thinking. He makes them repeat each new word simultaneously and indivi-

[1] *Min. Counc.* 1853-4, vol. ii. p. 922.

[2] *Constable's Educational Series*, First English Reading-Book, Part I.

dually, and the several sentences in the same way. When the class can read through the lesson with correctness and facility, he fixes their attention on the new words by themselves: referring to the column prefixed to the lesson for that purpose, and using the black-board to show precisely in what respects, both of sign and of sound, the words resemble each other. This gives occasion—the first that has occurred—for teaching the powers of the letters individually, and for insisting on distinctness in the utterance of these.[1] A suitable slate-exercise in connexion with each lesson would be to write down, either from the copy or from dictation, the words of the columns. This series should be read over with sufficient frequency to give perfect familiarity with all the words in it: and the field for practice may be extended, if the teacher construct new sentences for the class to read out of the materials of each lesson.

Third Step.—The pupil is now introduced to a reading-book; which is a critical point in his progress. He has now a much larger number of words under his eye at once; and he has to sustain his attention in the reading for himself. This is a severer trial than any he has yet encountered. We place him in the most favourable circumstances for bearing it, if we construct his first reading-book so that it contain just what he has already read. The introduction of new words would very much aggravate difficulties which are already sufficiently great for him. The success with which he takes this step will depend on the way in which the teacher conducts him through the first few pages. If he is carefully watched at this point, and taught to move his finger with precision from word to word in succession as they are pronounced, he will soon lose any sense of difficulty in following the lines of a printed page. This book should be read again and again till he can follow the reading with some ease.

Fourth Step.—The next reading-book contains new materials: but the pupil is not now bewildered amidst the difficulties incident to the first reading of a crowded page. The lessons are in continuation of those in the second series of tablet-lessons; and they are constructed and taught in precisely the same way. When the pupil has finished this book, he may be said to have learnt to read: he has surmounted the mechanical difficulties of the process; his eye has become familiar with the forms of words, and he has had under notice the chief phonic analogies of the language; and he is now ready to proceed with easy narrative. In ordinarily favourable circumstances a class should be ready for this at the commencement of their second year's reading.

283. Moral aids to the teaching of Reading.—The teacher may be here reminded that his own disposition will have more influence on the child's progress than even the propriety of his method.

[1] It will be observed that this exercise is not now liable to the objection urged against it when introduced before the pupil has learnt the sounds of the words.

This is true, doubtless, in every stage of teaching and in every subject; but it is especially true, when the child is of so tender age and is receiving his first technical instruction. Sympathy both with the failures and successes of childhood, and tact in dealing with its tendencies, are indispensable to the teacher who would engage with profit in this department of education: they may largely compensate for any defects in method; and they alone can turn even the best method to good account. It is this consideration which will generally be found to explain the seemingly arbitrary success which attends the teaching of elementary reading.

READING AS PART OF ELOCUTION.

The qualities of good reading may be summed up in these two, intelligence and expression. Reading is intelligent, when it is performed so as bring out the sense of the passage read: it is expressive, when the tones of the voice are so adapted to the sense as to bring it out with a strong effect.

284. Qualities of good Reading.—The principal elements of expressive reading are the following:—(1.) *Purity of utterance* consists in giving to the signs of the language their proper sounds. It will be found to depend mainly on the utterance of the vowel-sounds. (2.) *Distinctness of utterance* is that quality in virtue of which the full sound of a word or phrase is heard. It will be found to depend mainly on the utterance of the consonants. This quality is sometimes confounded with loudness or with slowness; but utterance should be distinct with whatever loudness, or at whatever rate, the reading is performed. (3.) *Correctness of accent* consists in giving to the parts of a word their proper relative force of sound.—On the qualities which have been named, purity and distinctness of utterance (or articulation) and correctness of accent, depends the character of pronunciation; which accordingly should be educated through them. (4.) *Emphasis* is the force of utterance necessary to bring out the effect of contrasted words in a sentence; whether the contrast be expressed or only implied. (5.) By *deliberateness* in reading is meant such a rate of utterance as shall enable the listener to follow with ease the sense of what is read. There is no absolute standard for this; a reader of ardent temperament will always read more quickly

than one of slow temperament, and each will feel a sense of unnaturalness in imitating the other. (6.) *Correctness of pitch* is necessary to give the reader command of his voice for the purposes of expression. He requires both to ascend and to descend in the scale of tones to express the various emotions, which he cannot do if he start on an extreme key. Each voice has a medium tone peculiar to itself, the tone which suits it in reading simple narrative, which the reader should be well acquainted with, and be able to strike at pleasure. Pitch must not be confounded with loudness. We can speak with different degrees of loudness on any pitch. To 'speak up,' is to raise the pitch of the voice on which one reads: to 'speak out' only to read with greater force or loudness on the same tone. (7.) *Modulation* includes inflection, which refers to the slide of the voice up or down on particular words according to the nature of the affirmation in which these occur, as affirmative, interrogative, optative, or the like; and modulation, in the strict sense of the term, or variation of tones in order to express the various feelings. Modulation, in both applications, is a natural gift; equally so with speech itself. If we address any one in anger, surprise, pain or joy, we show our anger, surprise, pain, or joy, in the tones of our voice. Nay, we cannot describe the most commonplace incident, make a single affirmation, ask a single question, or utter the shortest command, without using a variety of tone suitable to the expression. The same variety is required for reading. (8.) *Fluency or facility* in reading is that freedom from hesitancy or stammering which results from quick perception of the sense of a passage, and the familiarity of the eye with the forms of words.

To produce good reading, instruction, imitation, and practice, must all contribute.

285. Instruction necessary for Intelligent Reading.—Intelligence in reading requires that the reader be accustomed to consider the sense of what he reads. The conversation preliminary to the reading-lesson of younger classes will contribute to intelligent reading: with advanced classes, it forms a bond of connexion between their spoken language and the language of their books, without which the latter will always remain strange and only partially intelligible. The habit of grammatical analysis, and of explaining the scope of lessons, will promote intelligence: for

it will enable them to comprehend the general rule required for intelligent reading, viz., that the logical parts of a sentence should be read with a slight pause intervening, but without any interruption between the words that compose each part. In analysing sentences it would be advisable frequently to call the pupils' attention to the places where such pauses should be made in the reading: the reasons for these will be more evident to him when given in connexion with the analysis. It seems to follow from this consideration that class-reading should not be taken exclusively before the explanation and analysis, as it commonly is, but that the lesson should also be read after these are given, for the sake of the reading alone. It is very important for the teacher to remember that a class will not acquire the habit of looking for a sense in what they read, unless his method be such as to form the association in their minds.

286. Instruction necessary for Expressive Reading.—(1.) *Purity of utterance* is to be obtained by the persevering correction of all sounds which violate it, whether these occur in the pupils' reading or in his speech. They will be found to be chiefly local sounds or provincialisms: in which case they are difficult of correction, from the way in which they have impressed themselves on his mind. Where any pupil has contracted a particular error which has become inveterate, whether it be the interchange of vowel sounds, in which a provincialism generally lies, or whether it be an error peculiar to himself, arising, *e.g.*, from the interchange of two consonant sounds such as *l* and *r*, or *th* and *s*, he should receive private instruction occasionally; in giving which the teacher will find himself very much aided by such a knowledge of the mechanism of speech as enables him to place the pupil's organs of voice in the attitude required for the correct sound.—(2.) The habit of *indistinct utterance* is one which the teacher may do as much to prevent as to cure; since it is generally incurred owing to careless supervision in course of the early lessons, and is very difficult to eradicate when it has become confirmed. The utterance of the powers of the letters, practised in the first steps of his progress, should do much to prevent it, provided the teacher insists on requiring this to be performed with force. A pupil who reads indistinctly should be required to read occasionally with a slight pause between the words of a phrase or the syl-

lables of a word ; this division and emphasis of parts, continued for a time, will check that habit of slurring of sounds in which indistinctness lies. In particular, he should be practised in words and combinations of words comprising the weaker consonants (dentals and liquids) which are most liable to be uttered indistinctly ; and he should be watched as he pronounces the unaccented syllables at the beginning and end of words, or the shorter words in a phrase adjoining its emphatic word.—(3.) *Correctness of accent*, as distinguished from purity of utterance, is attained with comparative ease ; learnt by imitation, it requires nothing further in the way of precept than the correction of any errors which occur.—(4.) Knowledge of *emphasis* depends entirely on the reader's perception of the sense of the passage he is reading ; so that the explanation of the one depends on the explanation of the other.—(5.) The same may be said of *deliberation* in reading. This quality consists of two elements : a proper observance of the voice-pauses, and of the quantities of the vowel sounds. By the voice-pauses are meant the pauses which a reader must make to bring out the sense, as distinct from the printed pauses, which are grammatical. The two sometimes correspond, but the former must often be inserted where the latter are not required. The vowel-sounds differ much in length ; thus feel or sweet should not be pronounced as feel or sweet, dream as dream, brood and broad as brood and broad, or mīne as mĭne. The long sounds are of frequent occurrence ; and the systematic curtailing of their length both deducts from the time due to the reading of a passage as a whole, and destroys all light and shade in expression.—(6.) and (7.) *Pitch and Modulation* may be considered together ; pitch denoting the key in which we read, and modulation the manner in which we vary the tones of the voice in that key. The difficulty of teaching good modulation in reading to children, varies with their social circumstances. The pupils in the higher class of schools acquire it with comparative ease, from having already acquired it in conversational language at home, and from the confidence with which they have learnt to express themselves before others. Children in the common school are for the most part destitute of both of these helps. The teacher will find no means effectual to give them good modulation in reading but those which enable children of the higher classes

to acquire it. He must engage his pupils in conversation on the subjects of their lessons; he will get them to speak with more freedom in this way, and therefore with more of the modulation which naturally belongs to speech. The substance of all the directions that can be given for modulation is that they should strive to read 'in a natural manner,' that is, to express the sentiments of the passage in the same tones as they would use, if these sentiments had to be expressed by them as their own: and there is no other way in which he can bring such children to feel the force of this rule. If they cannot modulate their voice properly in speech, they will never be able to do so in reading. Advanced classes alone, who have so far learned modulation by imitation, can profitably receive instruction in its theory, when their reading-lesson has been explained. They may have their attention called to the sentiments in it, and the style of expression suitable for each; the relative lengths of the voice-pauses and the reasons for inserting them; the emphatic word or words, and the design of the emphasis; and the rate of expression required by the passage as a whole or by the several parts of it. By such explanations may the intelligence and taste of the pupils be called forth upon their own reading.—(8.) *Fluency* in reading is not a matter of precept at all: it depends entirely, as will be seen afterwards, on the nature of the practice which the pupils receive.[1]

287. Correction of Errors.—Instruction in the art of reading includes, in addition to the exposition of rules, the correction of errors. These may be conveniently considered as of two kinds; errors of pronunciation, affecting the sounds of individual words, and errors of expression, consisting in an improper rate of utterance, neglect of emphasis, or false modulation; the former prevailing chiefly in younger classes, the latter in more advanced. That correction may become an efficient instrument in teaching, it must have two features: it must be thorough in its work, and comprehensive in its range.—(1.) It must be *thorough*. By this is meant that it must be done in such a way as to turn the attention of the whole class on the errors made by each pupil, and impress on all the correct sounds. With the youngest classes, errors should be corrected as they occur, the reader being interrupted

[1] *Principles of Elocution* in Chambers' *Educational Course*; Bell's *Manual of Elocution*; or the standard works of Walker, Sheridan, and others, on the art of reading.

for the purpose: and this mode may be followed as long as the class cannot freely read easy narrative. With more advanced classes, it seems better that the reader should be allowed to finish his sentence, uninterrupted either by word or sign, before corrections are made. Interruption, by disturbing the reader, tends to increase his errors; it prevents errors of the higher sort, which do not lie in the utterance of single words alone, from being noticed as they deserve; and it does not direct the attention of the class or the reader strongly enough on the errors and their corrections. But in calling for errors after a pupil has finished reading, the teacher should not do so in such a manner as to encourage a captious and fault-finding spirit; he must not exaggerate the errors which have been made, or insist on the pupils noticing errors of a kind beyond their power of observation; and he should seriously discourage false corrections evidently put forward by guess. When an error is corrected, the correction should be repeated by the pupil who made the error, and perhaps by the whole class; and the teacher will use his own discretion in determining whether the errors have been of sufficient importance to require the repetition of the whole sentence.—(2.) Correction must be *comprehensive* in its range; not confining itself, that is, to one kind of error, but directed to all the aspects of the reading. The teacher often fails to note with sufficient discernment the real character of the reading from the practice, widely prevalent, of never testing it but with book in hand. When he knows at the moment of the reading what the reader should be saying, his criticism cannot be so keen as when he depends on his ear alone to follow the passage. With the younger classes, indeed, this test would be too severe, but with the more advanced classes, considering what the object of reading is, it is not so. That teacher would do well, therefore, who frequently listens to their reading at a reasonable distance from them, and judges of its character by the degree of facility with which he finds himself able to follow it. (§ 267.)

These directions are given on the supposition that the teacher is alive to the necessity of *teaching* reading. But great part of the so-called teaching of reading is simply *hearing* reading. A pupil who commits faults is often required to read the passage again and again, without a word of instruction to show what

errors he has made or why he has to read it again. The waste of time is the least injury that results from this practice; he is confirmed in his errors by the act of repeating them, and he acquires a distaste for what seems to him a meaningless exercise. (§ 267.)

It is important that the instructions given in reading, as in other subjects, to individual pupils, should go to benefit the whole class. This result is often prevented by the arrangement of the class for the purpose of the reading-lesson. If all the pupils cannot hear the reading of each one, they cannot profit by the instruction based upon that reading. Every arrangement which does not admit of this is bad: and no arrangement admits of it adequately except that in square or in form of a horse-shoe. It is very desirable that a class engaged in this exercise should be as little disturbed by its neighbours as possible.

288. Reading as acquired by Imitation.—The acquisition of a good style of reading is mainly the result of imitation; equally with the acquisition of a good style of speech. Excellence in the one, indeed, is inseparably bound up with excellence in the other. If the child acquire a good habit of speech, we may expect the whole excellence of it to be reproduced in his reading; if, on the other hand, he fall into a bad habit of speech, he labours under insuperable difficulties in trying to become a good reader. That he may be in favourable circumstances for learning to read well, he must have before him a good model, both of speech and of reading.

The teacher should therefore use a correct style of speech in his whole intercourse with his pupils, not less in his private conversation with them than in his lessons of every kind. For the habit which he seeks to form, the time at his disposal is all too short, especially as the language they hear out of doors is not likely to be a model of correctness. The qualities of his speech may be expected, more or less, to appear in theirs, and through that in their reading: thus, where the teacher's language is deliberate and distinct, the style of the school-reading is seldom the reverse. It may be added that, whilst he sets them an example in his own speech, he should never overlook anything that requires correction in theirs.

When the teacher has explained to his class how a passage

should be read, or when he wishes it to be better read by them, he should himself read it, that they may observe his modulations; and this should be a thing not of occasional, but of very frequent and regular, occurrence. It cannot be too strongly recommended to him that he should also read to them at stated times from some suitable work of general interest. This is a practice not less pleasant than profitable. It gives them a motive to try to excel in reading, for it shows them palpably the pleasures which reading opens up: it imparts general information, and impresses them with sentiments of what is beautiful and good: it teaches them to listen to continuous narrative, which is only next in importance to reading itself: when judiciously managed it elevates their general intelligence and strengthens their desire for knowledge: and, with special reference to our present purpose, it keeps constantly before them an example of reading *applied*, as they will afterwards have to apply it, for the instruction of themselves and others. Two or three weekly readings of this nature may be expected to improve the tone of class-reading in a marked manner. These considerations suggest the great importance of the teacher being himself able to read well, and of his bestowing great care on the reading of his assistants or pupil-teachers. In schools with pupil-teachers, the reading *should be* the best performed of all the exercises.[1]

289. Practice of Reading.—Practice is what is chiefly, and in many cases exclusively, relied on in schools to form the pupil's reading: a fact sufficient in itself to account for the imperfect results so often attained. Where there is no model held up for his imitation, and little or no instruction given him in reading, practice is as likely to confirm a bad style as to impart a good one. This is the first fault, then, often observable in reading practice, that it is expected to accomplish what by itself it never can.—Another defect common to the practice of reading in schools is that it fails to accustom the pupil to continuous reading. He cannot feel the same interest in a subject, in the description of which he reads only a detached sentence. It is continuous reading that he will have to practise in after life, if he reads at all either for his own instruction or for that of

[1] How far it is so may be seen in the *Report of the Education Commission*, chap. iv. sect. 3: which deserves the teacher's careful perusal.

others; to give him the habit, therefore, of sustaining his attention, and to give him command over his voice, he should be accustomed to the reading of paragraphs. This can be done only to a moderate extent in the reading-lesson; but the teacher who is himself in the habit of reading to his class can easily find further opportunities for it. (§ 290.)—Another fault is the inadequate amount of time that is commonly given to reading. It is generally included as part of the English lesson, and for the most part valued only as affording materials for the intellectual exercises of grammar and explanation. But there should be provided for it, over and above, a separate time in the daily routine; in which the reading itself should be the entire end of the lesson. Next to the religious instruction of a school, it has, of all subjects, the first claim to be adequately provided for. Such an arrangement is attended with this advantage, that it enables the teacher to connect with the reading-lesson, more directly than is otherwise practicable, the stimulus which results from attaching a distinct value to eminence in it.[1]

290. **Reading-Books.**—The nature of the reading-books used in school has great influence in determining whether the reading practice shall be effective for its end or not. Generally speaking, those in present use[2] are deficient in two features:—(1.) They are not sufficiently graduated; in consequence of which, the pupil has not enough of practice in any one stage of his progress, and is kept reading at the utmost stretch of difficulty of which he is capable. Thus his reading is always a task for him: it presents him with difficulties to encounter at every step, but never with any of the pleasures of reading which should accompany the overcoming of these difficulties. Moreover, if fluency of reading is to be attained, as it is, by reading largely what is quite level to reasonable effort on the part of the reader, this quality can hardly be acquired by the use of reading-books thus defective in construction. School reading-books should therefore recognise a greater number of stages in progress than they do, and present more material for reading under each. Meanwhile the teacher may so far accommodate himself to existing sets by com-

[1] *Min. Counc.* 1852-53, Circular, p. 70.

[2] The series of reading-books published in "Constable's Educational Series" must be exempted from this charge.

bining them.—(2.) The materials of reading-books are often ill-judged with a view to progress in a good style of reading. Extracts of a technical scientific nature are not generally read well, because they are seldom read with any lively interest. It does seem possible to construct reading-books which shall convey sufficient information to the pupils, yet in a style sufficiently attractive to form in them a taste for reading.

Whether this is done or not, but particularly if it is not, additional reading-practice should be sought elsewhere. And there is no difficulty in finding it. The teacher has only to associate the pupils with himself in reading to the class: the book which he has chosen will serve them equally well. It is no disadvantage that only one reads and the rest listen. The privilege of reading to the class must from the nature of the case fall most largely into the hands of the best readers in it; but those who are deficient are likely to feel the greater stimulus to advance to that point of attainment which will warrant the teacher in admitting them to share it.[1]

It is for the purpose of giving additional practice in reading, and thereby promoting a taste for, and fluency in, the art, that schools should endeavour to have a small, but suitably selected, collection of books for the elder pupils, on subjects of general interest. There is no doubt that the pupils would read them, if the teacher took a little pains to show them that he felt pleasure in their doing so; not by anything like formal examination, but by kindly occasional inquiry, and by reference in course of instruction to what they have been reading. In this way the school might go far to form the habit of reading in its elder pupils, whilst it would do much to promote their general intelligence.

291. Simultaneous Reading.—The practice of simultaneous reading may be attended with advantage in a junior class which has conquered the mechanical difficulties of reading. The principle of its utility is, that the inferior readers of a class are compelled for the time to conform to the standard of the better readers. (1.) It influences the reading of the class favourably in point of distinctness: the mere effort required from all to keep together improves their articulation. In point of fact, one is always struck by the distinctness that marks well-conducted simultaneous read-

[1] *Min. Counc.* 1847-8, vol. i. pp. 28-30.

ing. (2.) It improves the rate of reading where that is defective. The quick reader it moderates; the sluggish it stimulates; drawing both by a power of sympathy which they cannot resist to abandon their peculiarities for the time. (3.) It tends to remove asperities of tone and modulation. When the discord incident to first attempts has been worn away, simultaneous reading is remarkable for the correctness and harmony of its intonation.—But whilst this practice is, in its own place, an instrument of considerable power, we must not form an exaggerated idea of what it can accomplish. It corrects faults, rather than imparts excellencies. For reading, in its higher aspect, is eminently an individual power, depending for its character on individual intelligence, taste, and temperament; and it must therefore be cultivated in a class with a reference to the habits of individual minds.

292. **Learning by Heart.**—The old practice of committing passages to memory and reciting them in class, still retained in our higher seminaries, has been most unwisely discontinued in the common-school. Provided the committing be intelligent and not mechanical, the practice is attended with many advantages. (1.) It strengthens the verbal memory; a faculty unaccountably neglected, since education took the name of intellectual. (2.) It furnishes the mind with substantial ideas and elegant images; which, next to the habit of free and well-modulated speech, is the greatest want of children of the lower classes during their school-attendance. Anything which the teacher can do to supply this will have more effect in vivifying their whole education than all his improvements in technical method. (3.) It advances the pupils' power of composition: as will be urged more particularly in treating of that branch. And (4.) with special reference to the present question, it will improve their style of reading from the care with which they seek to give effect to their elocution in such an exercise, and the directness with which the teacher's attention is turned to the qualities of elocution.[1]

293. **Importance of Good Reading.**—The great practical importance of this branch of school education warrants us in commending it to a larger share of the teacher's thoughts than it generally receives. It is the means by which the pupils are to instruct themselves, when in course of time they take their places

[1] *Min. Counc.*, 1845, pp. 268-9; 1855, p. 169; 1856, pp. 238-9.

amongst the people of the country. The child who can use this instrument, and has been taught to feel a pleasure in using it at school, will not fall away from its use when he passes into the world; he will by it keep alive his own intelligence and maintain himself in contact with the current information of the day. But he must carry away with him a certain degree of fluency in reading; with this he will continue its use, for every one likes to do what he can do well; without this, he will give up its practice, for no one likes to do what he can only do imperfectly and with difficulty.

Let the teacher, then, have a certain standard of proficiency for his pupils to aim at, suited to their opportunities: let him guard against the vain endeavour to attain a finical nicety of accent, which his own good sense should tell him is unattainable in the circumstances of his district, or even a degree of refinement in expression which implies a higher degree of general culture than they can ever reach: then, if he will only use carefully, harmoniously, and with faith the means at his disposal, even in spite of the shortened school-attendance now so prevalent, he will send away his pupils with a skill in the art of reading which they will gladly cherish for themselves through all their occupations in life.

CHAPTER II.

SPELLING.

294. Theory of Spelling.—The object of learning spelling is to be able to write words correctly.

Three conditions are necessary to a good method of learning it. (1.) Since spelling has reference to the forms of words, the eye of the learner should be familiar with these forms from having repeatedly observed them, before he can reasonably be asked to reproduce them in writing. Spelling should therefore follow reading, which alone can give the eye that familiarity; nor should it be begun till the pupil has read enough to acquaint him with the forms of the commonest words in the language.—(2). The teaching of

spelling should follow the general law, that all instruction in the forms of a language should be based on an understanding of their meaning. Just as in the case of reading, the sense of words will be found a far stronger and more interesting bond of association for the forms of words than is afforded by their appearance to the ear or the eye alone.—(3.) If spelling is learnt for the sake of writing, it should be learnt mainly through that art to which it is afterwards to be applied, and only temporarily and subordinately by oral instruction.

The old method of learning spelling, which consisted in learning by heart the letters in columns of isolated words, contradicting as it did each of these conditions, was the worst possible, because the most unnatural, that could be devised. A more rational method, of which the following is an outline, will lighten the pupil's labour indefinitely.

295. **Preparation for Spelling.**—During the first steps of his reading the pupil should not be distracted with spelling at all: he is sufficiently engaged in learning to read, and the more quickly and effectually he does this, so much the better for the spelling which is shortly to follow. By observing again and again the words in his reading-lessons, by the comparison of such as have a phonic resemblance, and by the exercise of copying them on his slate, he has their images stamped indelibly on his mind. In learning to read, he learns to read and spell; and we can add nothing at this period to the process required for his reading, which would make it more effectual with a view to his spelling. We shall find that when he has finished these reading-steps, he can not only spell all the words which have occurred, but will have a certain *power* of spelling, acquired through that observation of words which (as already stated) he carries on for himself from the first moment they come under his notice. Thus the pupil is best learning to spell at this period, when spelling is apparently overlooked.[1]

The spelling-lessons of junior classes may be divided into two kinds: (1.) those in which the spelling is the main object of the lesson (*formal* spelling), and (2.) those in which it is only taken by the way (*incidental* spelling).

[1] The student learning a foreign language never thinks of specially learning its spelling; he gives himself to the reading of it, knowing that in due time the spelling will come of itself.

296. Spelling in connexion with the Reading-Lesson.—Spelling may be combined with the reading-lesson, when the pupil begins his second reading-book. But no special passage need be prescribed for some time. The only spelling which is valuable at this period of his progress is that which shows that the words of his previous reading-lessons are impressed on his memory. The exercise should therefore be a test of what has been already learnt in that way rather than the learning off of new words, and the teacher should hold himself free to ask the oral spelling of the lesson as a whole, except those words in it which happen to occur for the first time: to these, however, attention should be specially and repeatedly directed either on the book or on the board, that the eye may notice their forms: and a slate-exercise of copying them out will impress them both for reading and spelling. When the pupil has advanced so far in his reading that he can acquire new words through it, it is reasonable and necessary that special passages should be prescribed as materials for spelling.

The spelling exercises should from the first consist largely of sentences; so that words may be spelt in the connexions in which they are used in the language. In dividing the sentences for this purpose, the teacher should be guided by the sense, and make the phrases longer or shorter according to the advancement of his class. Each phrase should be dictated distinctly, but only once: the pupil may repeat it before spelling. Any words of special difficulty should be spelt more than once by themselves; and such expedients as spelling simultaneously or by 'letter about' may be resorted to at the teacher's discretion.

297. Spelling by Syllables.—Correct spelling requires not only a proper order of letters in a word, but a proper division of syllables when these require to be divided. The practice of spelling by syllables should therefore be followed: not only will it cost no additional trouble, but it will most materially diminish the whole trouble of spelling, since errors are most frequently caused by the pupil falling into confusion from the lengths of words, which this practice would prevent. A strictly accurate division of syllables need not be insisted on at first; often, indeed, the precise division of syllables in a word is a matter of doubt. The ear will be a sufficiently correct guide for some time, and the youngest pupil has no difficulty in dividing words by its

guidance: more advanced pupils should be required to take in addition the assistance of the etymology. The most expeditious and effective way of spelling by the syllables is simply to require a slight pause at the end of each. As a rule, words should not be taken to pieces and each syllable dealt with as if it were a whole. Not to speak of the waste of time, such a process does not facilitate the spelling, but the reverse; because it presents combinations of letters which the eye of the pupil has not noticed in their separate capacity, and strips the spelling of all association but that with the sound alone. Now, the spelling should be associated with the sound, provided it is previously associated with the sense and with the form of the word as presented to the eye, and it is for this purpose that the pupil is made to pronounce words when he spells them: but it is a false principle to associate it with the sound alone.—Spelling words 'syllable about' is a much better mode of exercise than spelling them 'letter about.'

298. **Classification of Words for Spelling.**—An interesting and profitable exercise in spelling may be given in connexion with the classification of words. The teacher may propose to have all those words spelt which rhyme together; or those which denote articles of food, drink, clothing, and furniture; the names of articles used for writing, building, travelling, and the like; the names of qualities belonging to any object; the words which are formed from one root, Latin or Saxon; the names of individuals and species comprehended under one genus. This exercise may obviously be framed to suit any stage of advancement, considering the various principles of classification which may be followed, viz., the forms of words, their meanings, their derivation, and their logical relation; and it is valuable not for the practice in spelling alone which it gives, but for what it teaches of the use of words, and for the mental exercise implied in the classification. It is equally suited for writing and for oral instruction.

299. **Incidental Spelling.**—It may be said of almost all the lessons given in school, and particularly of those given to younger classes, that, on whatever subject they are given, they are at the same time lessons on language: for the words used in them must be made familiar to the class both in their meanings and their forms. Spelling may therefore be taken incidentally to them all. Thus the object-lesson gives opportunity for spelling the names of com-

mon objects, qualities, and actions; the form-lesson, the names and qualities of commonly-occurring forms; the lesson on number, the names of the numbers, ordinal and cardinal; and even the Bible-lesson, the names of important persons and places. Where these names do not occur to the class for the first time, the spelling of them may be asked at once; where they are new, they should be presented on the black-board that the class may notice their forms with the eye before spelling them from memory. This indeed is one great use of the board in such lessons (§ 247). Incidental spelling is a very profitable exercise, from the strict connexion which it maintains between the spelling of words and their meanings. The caution most required in giving it is that, as it is only *incidental* to a lesson, it must be kept in its own place.

300. Spelling to Dictation.—In advanced classes, whilst oral spelling need not be entirely relinquished owing to the convenience and expeditiousness with which it may be given, writing to dictation becomes the prevailing form of the spelling-exercise. As spelling is learnt for the sake of writing, so it is most effectually impressed through writing. This form of exercise should therefore be prescribed in every common-school, subject to these conditions:—(1.) The class to which it is given must be sufficiently advanced in writing to warrant the hope of an adequate return for the time devoted to the exercise. A class which is struggling with the mechanical difficulties of writing cannot profitably engage in it as commonly practised. The extent to which slate-exercise may be made subservient to spelling at this stage of its progress has already been indicated.—(2.) The passage dictated must be suitable to the advancement of the class, and should be so framed as to present no difficulties but those of spelling alone. It should for the most part be prepared by the pupils beforehand, and in the way of writing it out. The dictation should be very distinct, according to the logical parts of sentences, without undue repetition, and in phrases of a length varied according to the state of the class.—(3.) The value of the exercise does not consist in the passage being *dictated*, but in its being *written*. Simple transcription from a printed page will in many cases serve the teacher's purpose better than dictation: it will often be more convenient as an exercise in school, and it is always at hand as a means of securing home-preparation of spelling.—(4.) The written spelling-exercise should be thoroughly

corrected. If it be not, there is no more effectual means of impressing errors. Of the time set apart for dictation, therefore, so much should be allowed for correction. The teacher cannot correct all the errors personally, nor even perhaps with the aid of an assistant: he must resort to a plan of mutual correction. Reading over the passage along with the class, he should have these words spelt aloud in which he suspects that error may have been made: the errors in each exercise should be scored and summed up; and the corrections appended either at the time or against next lesson. (§ 332.)

301. **Difficult and Exceptional Words.**—It is not the length of words that makes them difficult to spell, but their irregularity; the most perplexing being those in which the same sound is denoted by different letters or combinations of letters, such as *believe* and *receive*, *proceed* and *precede*, *there* and *their*, and the like, and those which are increased by a syllable for the purpose of inflexion, as *forgetting* and *appealing*. To impress the forms of such words is the most difficult point in the teaching of spelling. Special text-books for dictation are serviceable in collecting and arranging all the irregularities of orthography in the language, and so enabling the teacher to include them all in his spelling-lessons: whilst, if put into the hands of the pupil, they may be made the means of habituating his eye to the forms of the words. But in the general case the teacher of a common-school cannot have facilities of this nature. He must employ the daily reading-book for dictation; and he has on the whole no reason to complain of this limitation. For in the course of the instruction he can call the special attention of his class to all irregular forms, and he can keep note of them so as to compare them when they admit of comparison. He should moreover keep a permanent record of the words which have caused difficulty, and either prescribe them occasionally for transcription at home, or construct special dictation-exercises which shall involve them. An advanced class may with advantage keep a list of such words for themselves. On such comparison and frequency of notice must the teacher rely to overcome the difficulty of exceptional words; whether they occur in the class reading-book, or whether they are merely suggested by similar or contrasting words which occur therein. But he should not burden his lessons with words of rare occurrence.

302. Spelling by Rules.—No reference has been made to rules for spelling ; though such may be given. *E.g.*, if we compare *compel compelling* and *get getting* with *forbear forbearing* and *heal healing*, we perceive that verbs which end in, or consist of, a short accented syllable double their final letter when increased, whilst those which end in, or consist of, a long syllable do not. And it is not difficult to discern the reason of such a rule. Again if we compare *contrive contrivance* and *compare comparable* with *change changeable* and *grace graceful*, and with *change changing* and *grace gracing*, we observe that the silent *e* is in some circumstances retained on the increase of a verb, and in others not. Once more, if we compare *tell*, *fill*, *full*, *will* and *skill* with *foretel*, *fulfil*, *wilful*, *skilful*, we see that certain words ending in a double consonant drop one when they receive a syllable of increase. But these and such like rules are of no use to the pupil who is learning spelling at school. They may be useful to the adult who is desirous of making good his deficiencies in this branch, though, from the number of exceptions to the rules, even he will often be led astray by them ; but, before they could be so to the young learner, he ought to have learnt spelling. For him spelling, as was stated at the outset, is a habit of the eye, and not a matter of the reason at all.

Spelling is a branch of knowledge of which the possession procures no credit, but the want entails disgrace. Youth is the proper season for acquiring it : for during its years alone has the eye adequate opportunity of accustoming itself to the forms of words. It may seem a work of great labour to acquire it, and doubtless it is so, if we consider spelling apart from reading : but by a judicious method the labour of learning to spell is not in great excess over that which is needed for learning to read. Whatever it be, youth is the time for it. In the face of so much public proof to the contrary, it is impossible to say that this elementary, though very necessary, branch receives sufficient care in its tuition in common-schools generally ; we conclude, therefore, by commending it, as we commended reading, to a larger share of the teacher's thoughts.[1]

[1] *Quart. Journ. Educ.* No. III. ; *School-Master* vol. ii. Edgeworth's *Practical Education*, vol. i. chap. 2.

CHAPTER III.

EXPLANATION OF WORDS.

303. Primary and Derived Words.—One great design of all the instruction given in school is to train the child to the use of language. The communication of knowledge is doubtless important; but much more important at this period as a means than as an end. It is the means through which he is prepared for subsequent study; on the one hand, by having his mind brought into a state of activity and accustomed to work, and on the other by obtaining such an acquaintance with language as shall facilitate his future acquisitions. The object-lesson fixes his attention on the names of things and actions, and of the qualities of both; whilst his lessons on number and form extend his vocabulary in other departments. And this feature of these lessons is so important that any one of them which should not explain to him the principal terms which it uses cannot be considered as having attained its full design, however successful it be in other respects.

The class of words with which he becomes familiar in course of his early oral instruction will be seen on examination to be the simple primary words of the language, that is to say, those words which are not derived from other words, but from which by addition or modification others are derived. The process by which he is made familiar with these will be found to be one not of explanation, but of illustration: that is to say, the thing, action, or quality denoted by a word is submitted to his observation or verified from his experience at the time the word is given him. This process commences with the first instruction which he receives. And we have seen that upon the mode and extent to which it is carried out depends his progress in reading and spelling; for in both of these branches the learning of the forms of words must be based on a knowledge of their sense.

The early reading-lessons present the child with those words alone with which he is already familiar in speech; but, when he has obtained facility in reading, his lessons may quite properly

present him with new words, nay they cannot avoid doing so. These will be to a certain extent primary words: in which case they can be explained only by being illustrated. But they will be for the most part derived words; words formed from primary ones which have been already illustrated, and which may therefore be comprehended by him without repeating the illustration. There must be a regular provision in connexion with the reading-lesson for the explanation of these words; and this is recognised in that part of school-instruction which is commonly called 'Derivation' or 'Etymology;' whose object is the explanation of words by reference to the source and manner of their formation.

304. First Instruction in Derivation.—The nature of the first instruction in derivation may be exemplified as follows. Suppose the word *builder* to occur in the reading-lesson; the teacher asks its meaning and is answered 'one who builds:' he directs the class to observe that it differs from *build* in having the syllable *er* added to it; he then asks for other words having the same ending, and obtains some with their meanings, *e.g.*, *teacher*, one who teaches—*farmer*, one who farms or tills the ground—*singer*, one who sings—*speaker*, one who speaks, and so on. From these words as materials the class is made to infer that the termination *er* denotes 'the person who *does* a thing.' So, to take the adjective as an example, the occurrence of such a word as *careful*, compared with some other words of similar ending which the class will be able to give, such as *skilful*, *hopeful*, *doubtful*, and the like, will enable them to infer the force of the affix *ful*. And once more, to take the verb as an example, the occurrence of the word *shorten*, which they know means *to make short*, and its comparison with other words of their own suggestion, such as *lengthen*, *harden*, *soften*, and the like, will show them that the force of the affix *en* in such circumstances is *to make*. In the same way may be gone through the principal affixes which are used in the language. The affixes are taken first, as the words to which they are added are by themselves simple English words, which the pupils for the most part already understand. For the same reason, the Saxon prefixes should be taken before the Latin ones; which are taken last, because the syllables to which they are prefixed are not primary English words, nor, indeed, by themselves words at all, and also because of the addi-

tional difficulty resulting from the various forms under which most of them appear. But they have this advantage on the other hand, that their meaning is always distinct and uniform. They should be taught in the same way as the affixes. Thus, the occurrence of the word *predict*, and the comparison of its meaning with that of other words beginning with the same syllable, such as *precede*, *prefix*, *pretend*, and the like, will enable the class to infer the meaning of the prefix *pre*. And in the same way may the others be taken. On which method of instruction the following remarks may be made:—(1.) It proceeds entirely by oral instruction; requiring no text-book of any sort other than what is used for reading from.—(2.) Its results are arrived at by analysis of words whose meaning the class know, and by inference founded on the facts which this analysis leads them to observe.—(3.) Words are not explained singly, but in groups, as the families of words which form the vocabulary are derived from their primitives on uniform principles. Thus the understanding of one affix or prefix helps to the understanding of all the words in which it occurs.—(4.) The process of illustration which is required to make the pupil acquainted with the primary words does not need to be repeated with their derivatives. He can now use these in their capacity of signs, abstracted from the things signified.—(5.) From the nature of the exercise, it cannot be begun with advantage till the pupil has a considerable acquaintance with language: sufficient, at the least, to furnish materials for the lessons.—(6.) It is not necessary that the pupil should commence this subject by learning lists of Latin roots, as is sometimes supposed. These will be seen to be of use in their own place; but the derivation of words may be evidently carried on to a great extent without travelling beyond the vocabulary of the mother-tongue, as the examples above given suffice to show.

305. Different Forms of the same Prefix.—To complete the materials for pursuing the study of etymology further, the pupil has to learn the different forms under which each of the prefixes may appear. This may be done in the way in which he learns the prefixes themselves; viz., by the observation of a number of words in which the particular prefix occurs. Thus a comparison of the forms of the words, *a*scend, *ac*cede, *af*firm,

*agg*randize, etc., will show him that the prefix *ad* appears in the forms *a*, *ac*, *af*, *ag*, etc. When a similar course of observation has acquainted him with the varieties of all the prefixes, and with the principle on which the interchange of form takes place, he must commit to memory what he has learned, both of affixes and prefixes. Numerous though they be, the task is not one of difficulty; as the exercise of that faculty now rests on the previous exercise of intelligence. There will be frequent occasion for noticing, as here, that the proper time in teaching for the pupil to learn off lists, either of words or of measurements, is after he has by his own observation acquainted himself with the individual words or measurements which the list comprise. (§§ 319, 365.)

306. Families of Words.—Suppose the root for a particular lesson to be *via, a way;* the questioning may proceed in this manner:—'Mention a verb denoting *to wander from the way?*' to *deviate*—the act of doing so? *deviation*—the adjective applied to a person or thing which never does so? *undeviating*—adjective applied to a path which leads one *from his way? devious*—adjective meaning 'which meets us in the way,' and hence 'clear or evident?' *obvious*—adjective applied to any thing through which a way may be made? *pervious*—its opposite? *impervious*—adjective applied to 'what one may expect to hear where three ways meet,' that is, to what is of little importance? *trivial*—and so on. In this mode of questioning, the teacher gives the meanings of the derivatives, and, by the manner in which he places the emphasis in asking the questions, some indication of the forms which they are to assume; and he expects the class to construct the words. But the mode of questioning may be reversed: the teacher may give the derivatives in their order, and expect the class to give their meanings and connexion with the root. This mode evidently exacts more from the pupil, and will therefore naturally follow considerable practice in the former.

A mode of questioning different from either of these may sometimes be heard; according to which, when a root has been named as explanatory of a particular word, the teacher merely asks for any other derivative from the same which may occur to the pupil. This is a disorderly and incomplete process, and does not attain

any of the benefit which results from word-making when systematically pursued.

307. Subdivisions in Families of Words.—Families of words are naturally taken according to the subdivisions suggested by the several prefixes; but it is often expedient or necessary to attend to other principles of subdivision. Thus the root of a family may appear in different forms for the purposes of derivation; *e.g.*, *mitto I send* appears in three, *mit* as in *commit* and *submit*, *miss* as in *dismiss* and *remiss*, *mise* as in *demise* and *surmise;* whilst *pono I place* appears in four, *pone* as in *depone* and *repone*, *pose* as in *compose* and *depose*, *pound* as in *compound* and *expound*, and *posit* as in *deposit* and *repositary*. Again, the leading word in a subdivision may have two applications, in which case it will have two distinct sets of words formed from it; thus *compose* meaning to *put together* or *construct* (whether a discourse or any other work of art) gives *composer* and *composition*, whilst the same word meaning to *settle* or *calm* gives *composure*, *composed*, and *discompose*. Such subdivisions should be carefully noticed; the nice discrimination required for this purpose being very beneficial, in addition to the greater insight into the meanings of the terms to which it leads. In particular, wherever they arise from a double sense in any word, it is important to give prominence to its original and literal sense as suggested by the root; since, strictly speaking, a word cannot have two different meanings, but only different applications of the same notion. Thus the two senses of *compose* are only different applications of its fundamental meaning *to place together*.

308. Mechanical Aids.—The black-board is capable of rendering essential service to this exercise, by presenting in convenient form to the eye the family of words in the order of derivation, and as subdivided from any peculiarity either of form or meaning. For this purpose the teacher should determine with himself beforehand the mode of notation to be adopted, making the scheme of words as placed on the board correspond to the scheme according to which he has arranged the family, and executing it as neatly as he can. All words need not be written down in full: it is sufficient to write the heads of subdivisions at length, and only the prefixes or affixes of the rest. To whatever extent this exercise is prescribed as home-work to the pupil, he

should be required to observe the same clearness of method and neatness of execution; distinguishing the prefixes and affixes from the root by hyphen. As the form of the words derived requires attention as well as their meaning, the exercise, as already indicated, § 297, may advantageously be combined with spelling, both in school and as a home-exercise.

309. Current Meanings of Words.—The etymological meaning of a word is very often not the meaning which it actually bears, as in the case of the derivatives from *ædes*, a house, viz., *edifice*, *edify*, and *edification*. The first is used in a literal sense, and the other two in a figurative; a distinction which is quite arbitrary, and not suggested by anything in the forms of the words. As a knowledge of the current signification of words is the ultimate object of the exercise, it is expedient in all cases like this, where the etymological meaning is apt to mislead, not only to direct the pupil's attention strongly to the fact, but to require him to use the word in a sentence of his own making, to prove that he apprehends its force. And not only in these cases, but in all cases where a word has a double application, and where the derived word is at all unfamiliar, this practice will be found advantageous. In this expedient the lesson in word-making has a point of contact with 'Composition.'

The necessity of bringing etymology to bear on the current meanings of words can hardly be overlooked if the teacher keeps the study of it, as he should do, in strict connexion with the reading-lesson. Like grammar, it requires a certain amount of time to be devoted to it, as a special subject; but like grammar also, it is learned for, and finds its natural application in, the study of connected discourse. "It shows, therefore, an inadequate conception of the ultimate design of learning etymology, to continue the pursuit of it entirely as an isolated department, not connected with the ordinary lessons. The true use of it will be found in its judicious application to determine the exact sense of words encountered in the reading-lesson; and this must be done in strict subordination to the pursuit of the general scope of the passage, for it will be a hindrance and not a help, if it withdraw the attention from the author's ideas to other and irrelevant matters."[1]

[1] *Dick Bequest Reports* for 1844 and 1854.

310. Requisites of Instruction in Derivation.—This exercise should be accurate and thorough so far as it goes. Not that every Latin root which has passed over into the English language is to be noticed, or that all the derivatives from each should be traced: considering that it is the common school of which we are speaking, all words which are technical and of rare occurrence should be omitted. But whatever words the teacher determines to explain etymologically should be explained fully and accurately. A teacher who cannot assign the roots with confidence and with correctness, both in their forms and meanings, should content himself with explaining words simply by reference to their current meanings. Nothing looks worse than blunders in etymology; derivation being quite uncalled for in school except on the part of those who are competently versed in it. And a loose and superficial etymology on the part of the pupils is worse than none at all, as it positively misleads them from the meanings. Inaccuracy commonly shows itself in two particulars:—(1.) Words are sometimes coined under the influence of analogy, which have no real existence; this is inaccuracy in respect of knowledge of the language.—(2.) The sense of words is sometimes inexactly rendered; as when a noun is given as equivalent to an adjective or verb, and *vice versa*. This is an inaccuracy in method; and though often lightly thought of, is in truth intolerable, considering the nature of this exercise.—It has been made a question whether some knowledge of the Latin language is essential in the teacher to the success of this instruction. Perhaps the learning of a list of roots alone will enable him to conduct it correctly so far; but there can be little doubt, if we consider the variety of forms assumed in English by these roots, that he who has some knowledge of Latin will be able to conduct it to a greater extent, as well as with greater confidence and insight, than he who has not.

311. Saxon-English Etymology.—'Derivation' is for the most part confined to those families of words that come to us through the Latin: which seems to testify that it is these words peculiarly which require to be explained in this way. And there is no doubt that this is so. The Saxon part of our language is characteristically our mother-tongue, that which we gather by imitation during infancy and childhood, either in conversation or

by the kind of illustration already described. Further, this part of our language does not exist in large families; but for the most part in small ones, formed from the roots by vowel changes within the limits of the word rather than by prefixes. And again, a large proportion of the Saxon roots that might be assigned are as well given in the form of English words; so that Saxon derivation is to a great extent only the derivation of English words from one another. On the other hand, the Latin part of our language is much less our mother-tongue; it is that which we acquire as the result of education and a knowledge of books. To all intents and purposes it is a foreign language to the child. If we observe the process of derivation we shall find that it is virtually a translation of the Latin part of our language into the Saxon. Again, the Latin-English, like the Latin itself, exists in large and widely-branching families, so that it presents an extensive field for practice. Whilst, however, this is the case, and whilst it would be superfluous and even absurd to go into Saxon etymology with the pupil before the Latin, it will be found instructive with advanced pupils who are in circumstances to profit by an etymological exercise for its own sake and independently of the explanation which it gives of the meanings of single words, to classify English words round their Saxon roots; as the following examples sufficiently show :—

Sciran, to cut, gives *shear*, *shears*, *sheer*, *shearling*, *share* (as in ploughshare), *share* (a part), *shire*, *sheriff*, *shore*, *shower*, *sherd* or *shard*, *potsherd*, *sharded* (Shakspere), *shred*, *shirt*, *skirt*, *outskirt*, *short*, *shroud*, *scar*, *scare*, *score*, *scarce*, *-ity*, *scarf*, *scarp*, *scrap*, *sharp*, *-en*, *skerry*.

Faran, to go, gives to *fare*, *farewell*, *wayfaring*, *fare*, *far*, *forth*, *welfare*, *ferry*, *ford*, *Oxford*.

Stigan, to climb, gives *stairs*, *story*, *stile*, *stirrup*, *stalk*, *stack*, *stage*, *stag*, *stye*.

CHAPTER IV.

GRAMMAR.

312. Object of Teaching Grammar.—Grammar teaches the theory of correct expression.

An acquaintance with it is not indispensable to an understanding of language; which in all its aspects is a matter of habit rather than of rule. A child who is in the habit of listening to, and joining in, conversation, will acquire a knowledge of spoken language; and, if he is in the habit of reading and of having words and phrases explained to him, he will equally acquire a knowledge of written language. But, since language is the instrument of all thought, a more commanding knowledge of it than habit alone can give must be deemed a necessity of education, and particularly of all education which pretends to cultivate the mind. Hence grammar, which explains the elements of speech and the principles of their arrangement, is a universal subject of study.

The study of grammar, moreover, has an important bearing on the pupil's practical acquisition of language. For, since all its rules are drawn from language as actually used, it is necessary that correct examples should be submitted to his observation, and that he should try the language which he meets with by the rules which he learns. Grammar thus furnishes him with a criterion for judging of the correctness of expressions; by which, on the one hand, his imitation of those which are correct is more confident, intelligent, and rapid, and on the other, he is fortified against the influence of incorrect examples. Whilst, therefore, it has for its primary object the theory of expression, it may be considered as having for its secondary object to teach correct speaking and writing.

The nature of the mental exercise involved in the study of grammar is peculiar, and has much to do with the important position assigned to it in the common-school. All that has hitherto been submitted to the child has appealed to his mind through his observation. But the elements of this subject are not *things*. A noun is not *a table*, nor *a house*, nor *a dog*, but *the name* or sign of a certain kind of *notion;* and, being so, it is an abstraction, as are also the adjective, verb, and other parts of speech. Grammar deals not with the subject-matter of thought, which may admit of visible illustration; but with the forms of thought, which do not. Thus it is the pupil's first introduction to abstract thinking, and his preparation for all subsequent efforts in this field.

We may conveniently view the teaching of grammar as falling into three stages.

FIRST STAGE.

This is preliminary to the formal teaching of the subject, and aims at giving the learner a conception of the nature of the parts of speech and their principal inflexions.

313. First Stage—Method.—(1.) The instruction is entirely oral, and proceeds analytically; that is to say, it does not impart rules and apply these as if language were the product of grammar, but attains all its results by the pupil's own induction upon examples of expression submitted to him for examination.—(2.) The starting-point of the instruction should be the simple sentence. For *parts of speech* can be adequately illustrated only with reference to a *whole*, by their use in which their nature may be observed. And what is this whole? Speech; but, as speech is made up of sentences, it is the sentence, and therefore, taking the easiest form to begin with, the simple sentence. This is conformable to the general rule of elementary teaching, that procedure from the whole to its parts takes precedence of that from the parts to their whole.—(3.) In accordance with the principle which regulates all acquisition of language, the explanation of grammatical forms must be based on an understanding of the sense. The nature of the different classes of words denoted by *noun*, *verb*, *adjective*, etc., must therefore be familiar to the pupil before these terms are used. To give him this familiarity with language is one great object of the infant-school instruction; hence the extent to which it presents him with the names of *things*, of *qualities*, and of *actions*. Such exercise lays the proper foundation for the study of grammar.—(4.) Throughout the instruction the language presented for the pupil's observation should be mainly furnished orally by the teacher and by himself; for the obvious reason that illustrations drawn from this source are at this period more familiar and interesting to him than those drawn from books can be.

314. Order of Instruction.—As the groundwork of the whole the simple sentence should be first illustrated. From such a series of examples as this :—

Fire burns.
The fire burns.
The fire burns brightly.
The big fire burns brightly,

considered first individually and then comparatively, the pupil may be led, without any reference in the meantime to technical terms, to distinguish the two essential features of the simple sentence :—(1.) That it is made up of two parts, the one denoting *a thing* and the other *an action;* and (2.) that it is the complete expression of a thought, in contrast to either of its parts singly. Further examples, given by the teacher, should be examined by the class; and in turn they should with the teacher's help construct a number for themselves.

Founding on the illustration of the simple sentence which may have been given, the noun and the verb, as the two fundamental parts of speech, should next be illustrated. The noun should be handled in the spirit of the following notes :—'Write on the board a few sentences, *e.g.*, *The man walks, The boy runs, The girl reads*—ask the class to tell the words which denote *persons* in these—ask for other similar words, as father, soldier, etc.—explain that they do not denote *the same* person (thus *boy* is not the same as *man*), but that they agree in denoting *a person of some kind*—give the name applied to this class of words, viz., *noun*—get further examples, with the reasons for their being so; thus, the word *king* is a noun, because it denotes a person who reigns over a country; the word *farmer* is a noun, because it denotes a person who tills the ground; and so on.' This would be enough for one lesson. Subsequent lessons should be given on the noun as the name of a *place*, and as the name of a *thing;* and after revisal the ordinary definition constructed and committed to memory.—The verb may be handled in the following way :—'Write down a few sentences as before, *e.g.*, *The tree grows, The book fell, The hills rise*—ask the names of the *things* spoken of or *nouns*—what they are each said to do—ask one or two other words which denote *to do something, e.g., to run, to fly*, etc.—apply the term *verb* to such words—get further examples as before; thus, *to grow* is a verb, for it states what a plant does; *to learn* is a verb, for it states what a scholar does; and so on.' The intransitive verb is quite enough for one lesson. On recurring to the subject, further examples should be got of nouns and verbs which may be connected; either orally or on slate. Thus the teacher may ask the class to write down so many names of things connected with the garden, the school, the sky, food, etc.; or he may give some nouns and require verbs to be supplied; or verbs to which he wishes them to prefix suitable nouns. The substantive and transitive verbs will form materials for separate lessons.

When the noun and verb have been illustrated, it would be expedient to distinguish the two essential parts of the sentence as the *noun-part* and the *verb-part;* the former denoting the *thing* spoken of, which is *one* notwith-

standing other words are combined with its chief word, and the latter the *action* spoken of, which is likewise *one* in whatever number of words expressed. This view of the simple sentence should be well impressed by numerous examples: the advantage will appear in due course.

The other parts of speech, *article*, *adjective*, and *adverb*, introduced into the examples of the sentence already given, should then be taken in order, and illustrated in the same spirit as the noun and the verb have been. And the pupil should not be allowed to pass on, till he shows his familiarity with what he has learnt by the correctness with which he analyses examples given by the teacher, and furnishes corresponding examples himself.

Another series of lessons, like the above, should be devoted to this form of the sentence 'Fire is hot,' gradually enlarged into 'The big fire is exceedingly hot:' in which the points of agreement with the previous form should first be insisted on, viz., its having the two essential parts and its completeness as an expression of a thought; and then the points of difference, viz., the new form of the verb-part, the new idea denoted by the verb, and the new function and position of the adjective.—Scope is found for another series of lessons on the remaining form of the simple sentence, viz., that involving the transitive verb, as in 'The fire burns the table,' enlarged gradually to 'The big fire burns the beautiful table quickly:' in which the two points of agreement with the previous forms should first be noticed, and then the points of difference, viz., the new form of the verb-part, the new notion in the verb, and the occurrence of the adjective and noun in the verb-part. This last will not cause any trouble, if the distinction between noun-part and verb-part has been adequately impressed.

Successive series of lessons should be given on the *personal pronoun* and the *preposition:* their nature being inferred in the same way from sentences written on the board, and impressed by numerous examples required from the class. The preposition, which is apt to cause much difficulty in its illustration from its denoting, not a thing or an act, but a relation, may be handled in the following way:—'The teacher asks a pupil to place his hand *on* the table, then *above*, *below*, *beside*, *near*, etc., and to observe the position denoted by these words—reversing the process, he places his hand in these various positions, and asks the class to tell him *the words* denoting the several positions, which he gets repeated with emphasis and writes on the board—he then gives these words their name *preposition*—he then gives some sentences, and asks the class to pick out the prepositions, and to mention the two things which they connect—and finally asks them to make sentences for themselves containing the prepositions they have learnt.' The prepositions denoting 'rest' are sufficient for one lesson: on recurring to the subject, he can take those which denote 'motion.' Accurate definition of the word need not at this time be required.

Two parts of speech remain, the *conjunction* and the *relative pronoun;*

which are more difficult to illustrate from the fact that they occur only in the complex sentence. Some of the conjunctions, indeed, such as 'and' and 'or,' admit of very easy illustration: not so 'because,' 'when,' and the like. The teacher must proceed with them and the relative pronoun as before, writing down a few sentences of the simplest form in which they occur, asking the class to pick out the new parts of speech, showing in a familiar way how they join the two members which make up the sentence, requiring them to distinguish the conjunctions and relatives in sentences given by himself, and finally to make easy sentences of their own embodying them.

In this way all the parts of speech pass under review, and are illustrated, more or less fully, both as to their nature and their function in the sentence: the teacher exercising his discretion as to the rigidness of the definition with which he sums up his illustration in the several cases. And opportunity is found for revising the whole, if he think it expedient to set before his class other modes of assertion contained in the simple sentence than the indicative, such, *e.g.*, as the interrogative and the imperative.

315. **Inflexions.**—In the examples of the sentence which have hitherto been used, the parts of speech have occurred in various modifications: the noun as common or proper, singular or plural, nominative or objective; the verb, as present, past, or future; the adjective, as positive, comparative, or superlative. And to this there can be no objection; for, when the learner comprehends that the noun is the name of all words denoting *things*, he knows that *dogs* is a noun as well as *dog;* when he comprehends that all words denoting *action* are verbs, he knows that *run*, *ran*, *will run*, and *may run*, are all verbs alike; and when he understands that words denoting *quality* are adjectives, he knows that *taller* and *tallest* are examples as well as *tall*. But the instruction should now direct his attention to these modifications, both in their meanings and their forms. To take some examples—

Suppose the lesson is on 'number,' the teacher may write down two sentences involving the same verb-part, in which the nouns differ only in number. The pupil will himself tell the difference between them both in notion and form, and give as many examples as may be required.—'Case' is more difficult to explain in English, from the fact that there is no difference of form between the nominative and the objective. The teacher may find it expedient, therefore, to introduce the personal pronouns into the sentences which he writes on the board, that the pupils may have the help which is afforded by the difference in the *forms* of their cases, before they are asked to consider case as a mere *relation* of the noun to the verb.—To illustrate *tense*,

say the present tense, let the teacher write down such a sentence as 'I strike the table,' and ask for other sentences involving the same verb-part, such as '*you, we, they*, strike the table;' founding on these, he may lead the class to see that the form of the present tense is for these persons the same, whilst it is different only in the case of the 3d pers. sing.: the prevailing identity and the single instance of difference will keep the forms in their mind.—From a similar observation of sentences he could, in dealing with the *adjective*, show them how it is not inflected for number, gender, or case, but only for comparison. It thus appears that the inflexions of the parts of speech should be illustrated out of the simple sentence equally with the parts of speech themselves.

316. **Extent of First Stage.**—It may be advisable to recapitulate the amount of knowledge of which this first stage of instruction should leave the pupil in possession. (1.) He should be familiar with the nature of the simpler sentence (in its easier forms) as a whole; able to distinguish its two essential parts amidst the varying number of words in which these may be expressed, whether the sentence be indicative or interrogative; acquainted also with the difference between the sentence and the phrase. (2.) He should know the nature of the component parts of the simple sentence; not only of its greater parts, noun-part and verb-part, but of the several parts of speech which enter into them and the principal subdivisions of these, as of the noun into *common* and *proper*, of the verb into *transitive* and *intransitive*, of the adjective and adverb into those of *number* and those of *quality*. (3.) He should know the principal inflexions of the parts of speech, such as *number*, *gender*, and *case* in the noun and pronoun; *number*, *person*, and *tense* in the verb; and *comparison* in the adjective and adverb; both as to the notions involved in them and their forms. (4.) He should be able to exemplify all that he knows, both in sentences of his own making, and by selecting examples from his reading-book.

317. **Characteristics of Teaching.**—Presuming that the teacher comprehends the general method of procedure as already described, the success of his teaching will depend on the degree in which it is marked by the following features:—(1.) *Simplicity*, taken here in its literal sense, as meaning the presenting of only one, and that a sufficiently limited, point of thought to the pupil at a time. (2.) *Gradation*, which secures that these points follow each other in their natural progression. (3.) *Repetition*, *i.e.*,

going over the same ground again and again till a sufficient impression is made ; a process which is much required in this subject from its very nature, but which fortunately *does not need* to be wearisome to the young mind. (4.) *Illustration*, which brings together many examples of the same fact. (5.) *Application*, which applies the results of the instruction to the pupil's own language. (6.) *Definition*, which couches these results in language terse and clear, to be impressed on the memory. (7.) *Preciseness in the use of terms*, which chooses the proper term in designating any fact, and adheres to it uniformly : neglect of this, though quite inexcusable, considering how much it enhances the difficulty of a subject already difficult enough in itself from its abstractness, is nevertheless a very common fault.

318. **Time required for Instruction.**—Generally speaking, it is not safe to define any course of instruction in respect of the time at which it should commence, or at which it should end. All that can be attempted is to indicate an average ; and it is expedient to do this in the present case. Grammar should not be commenced in the infant-school. It is indeed quite possible to give the pupil some ideas of the parts of speech there ; but, not to mention that there is a sufficiency of subjects without this one to engage his attention, his time is much better occupied, with a view to his subsequent study of grammar, in learning the meanings of words, and, through their meanings, their different characters. No time whatever is lost by the delay. Against this consideration it is useless to urge the importance of the subject ; for this cannot by itself determine the time at which a subject should be taken up, but must be considered in connexion with its nature. Supposing that a commencement is made at about seven years of age, no one who appreciates the manner in which this preliminary instruction should be handled will account it an extravagant demand that it should occupy the pupil a year and a half or two years ; for it must be remembered that only a comparatively small portion of the weekly time can be devoted to it. It is well if about nine years of age the pupil is prepared to enter on the formal study of the subject from a text-book.[1]

[1] *Min. Counc.*, 1855, pp. 647-49.

SECOND STAGE.

319. Second Stage—Parsing.—To the second stage of the study of grammar may be conveniently referred all that is required to give the pupil a knowledge of syntactical parsing; that is, the ability to account, not only for the forms of individual words, but for the relations existing between words, by reference to the general practice of the language. We have therefore to notice how he should be taught (1.) to parse, and (2.) to parse syntactically.

To parse a word is to describe it fully in respect of its grammatical character and inflexions. The pupil has already made some progress in doing this; but he cannot be said to have taken even the first step in formal (or, as we may say, scientific) parsing, till he has learnt the whole system of inflexions of the various parts of speech. This is termed in the text-books the 'Etymology' or 'Accidence' of the language. Only when he is in possession of such an exhaustive system of forms, and when he can refer each word he meets with to its place in this system, can he be said to parse. The learning of classifications of any sort should, in elementary teaching, follow an extensive acquaintance with the individuals classified: the pupil, therefore, advances to his present task in favourable circumstances. And the teacher may invest it with additional interest, if along with the class he construct the tables to be learnt on the board (*e.g.*, the declension of nouns and conjugation of verbs) out of sentences: so that they may be conscious of the nature and object of the tables they have to learn. Still it remains a task for the memory, and one in the exaction of which there can be no compromise. The intelligence is designed to assist, not to supersede, the memory: and the pupil can make no further progress in the subject till he acquire a thorough familiarity with its nomenclature.

320. Syntactical Parsing.—To parse a word syntactically is to describe it in respect, not only of its grammatical character and inflexions, but of its grammatical relation to the adjoining words of the phrase or sentence in which it stands. The department of grammar which teaches these relations is syntax; and to it the pupil now advances. Yet he has been learning syntax in a

certain way from the first: he has been accustomed to hear and to give sentences which, besides exemplifying the facts for which they are quoted, are also examples of syntax; and he has read much of language connected according to the laws of syntax. He has thus a practical acquaintance with this part of the subject before he knows anything of its rules; it is a matter of habit with him before it becomes the result of study. He stands in the same position with regard to the rules of syntax now, as he did with regard to the parts of speech when he entered upon their study; and the conditions of method are the same. These have been already specified, and need not here be repeated. Each item of syntactical relation should be illustrated out of a number of sentences taken to exemplify it, *e.g.*,—

If the rule to be dealt with is that of the concord between a verb and its nominative, the teacher may write on the board two or three plural nouns, and ask the class to supply the verb parts. The pupils' practical knowledge of language will keep them right in the 'number' of the verbs they supply. Then he may present a few 'singular' nouns, and ask for verb-parts to correspond; the 'number' of these verbs will be right for the same reason as before. He will then make the pupils observe for themselves the correspondence between the 'number' of the noun and that of the verb in each sentence.—In another lesson he may show in a similar way the correspondence between the 'person' of the verb and that of the noun or pronoun which is its nominative: and then put the facts observed into rule for them to remember, "the verb agrees with its nominative in number and person." All the rules of syntax may be gone over in the same spirit, each being exemplified in sentences given by the teacher and by the class, and in instances selected from the reading-book and the grammar text-book. And, when that is done, the system of rules must be thoroughly committed to memory.

In this way grammar will continue to present to the pupil the appearance of a body of results deduced from an observation of language, and not of a collection of rules exercising an arbitrary and mysterious power over language from without. In presenting the subject to him under this aspect from first to last, lies the secret of success in teaching it: for this is the only way in which his intelligence can be exercised upon it, and in which he can feel that interest in pursuing it which arises from having an object in view.

321. Application of Syntactical Parsing.—The pupil has learnt the elements of parsing, and what is now before him is their

application. It is not in learning the elements, but in acquiring the power of their application, that the mental discipline involved in the study of grammar lies. Few in number as these elements are, they are always occurring in different relations; and it is only after long and patient comparison that the pupil feels any confidence in making his way through their ever-varying sequences. The exercises of application used in school are twofold.—(1.) Under each rule of syntax, as given in the text-books, there is a collection of sentences designed to exemplify it. The pupil may with comparative ease trace the application of a rule within a field specially limited for the purpose, and yet be quite at a loss when set to examine at large a passage from his reading-book: it is this consideration that explains the expediency of such special exercises. They should be short and clear in their structure, presenting no difficulty to withdraw his attention from the particular grammatical fact which they are put there to exhibit; and yet they should be varied in form. The frequency and variety with which he finds the rule exemplified within a short compass, is calculated to give him such a familiarity with it as will greatly facilitate his command of it for the purposes of general analysis. It has been made a question whether these exercises should consist of sentences violating the rule or of sentences exemplifying the rule: in the former case the pupil is expected to show that he perceives the application of the rule by making the necessary correction, in the latter, by simply pointing out the exemplification. When we consider how much the acquisition of language is matter of habit, the correct answer to this question seems to be, that violations of rule should not be set before junior pupils, but be reserved for those who are sufficiently advanced to have become accustomed to the correct forms of the language. But even in their case, the errors set before them for correction should be such as are likely to occur, we may say indeed, should be such as do in point of fact occur in English writers: no object whatever being gained by printing all sorts of impossible errors.—(2.) The higher kind of application, and that to which the other is merely preparatory, is the analysis of the language of the reading-book. The pupil has already been accustomed to select examples of the different parts of speech; but this exercise, which consists in picking out single words of the

same nature, cannot be compared in difficulty with that of determining the relation in which words of different natures stand to each other. Long practice and clear explanation alone can give facility in doing this : the only other help which the teacher can give —though it is a very important one—is carefully to graduate the style of the passages submitted for analysis to the attainments of his class. This, however, is a consideration more pertinent to the makers of school reading-books than to those who teach them.

322. Features of Good Parsing.—(1.) The teacher should accustom his pupils to a definite scheme of parsing. Two such schemes are in common use : the one according to which the parsing proceeds from the general to the particular, the other in which it proceeds from the particular to the general. Thus, in the sentence 'The boy reads,' the word 'reads' may be parsed as 'a verb, intransitive, irregular, active voice, indicative mood, present tense, singular, third person;' or it may be parsed in the reverse order. The former, which proceeds from the general to the particular is the more natural and easy to the learner. A table like the following may be serviceable as keeping in view all the items of description to be noticed in the parsing :—

The Word.	Part of Speech.	Subdivision.	Inflexion.	Syntax.	Rule of do.
Reads,	A Verb.	Intransitive, Irregular.	Active Voice, Indicative Mood, Present Tense, Singular, Third Person.	Agreeing with its Nominative Boy.	A Verb agrees etc.

Not that all the parts of speech admit of description, under all these heads; some may have no 'subdivision,' others no 'inflexion,' and under others it may not be necessary to add any 'rule of syntax.' But a regard to such a table will promote the desirable habit of parsing words as fully as they admit of, and so of including points not uncommonly overlooked, such as the connexion indicated by the 'conjunction' and the 'preposition.' All home-exercises prescribed in parsing should be executed neatly and in rigid conformity to the scheme the teacher has adopted.—(2.) The process of parsing should be one carried on by the pupils themselves : they should not depend on reiterated questioning by the teacher to extract it from them step by step, but should describe the words completely and freely of themselves. A well-

taught class will parse syntactically a whole sentence without any interruption save a few questions which the teacher may see fit to put as tests of their intelligence. This is a kind of questioning which never ceases to be necessary, even in the most advanced class.—(3.) The order in which the words of a sentence should be parsed is an important consideration. These are for the most part taken in the order in which they are printed : sometimes according to their logical connexion. Considering the general rule that has been already insisted on for the acquisition of the forms of language, any course which associates grammatical exercise more closely with an understanding of the sense of the passage must commend itself ; and the second order is therefore to be preferred. In a simple sentence the leading noun in the subject and the verb should be taken first, and then the words connected with each in their order ; in a complex sentence the member which conveys the principal assertion should first be treated in this way, and then the explanatory members in the order of their dependence. Perhaps this mode of parsing can only be thoroughly followed out when the pupil has learnt the ' analysis of sentences ;' but very much can be done in this direction before the pupil advances to that stage. It is true that progress will be slower for sometime from the amount of explanation required ; but the results will be more valuable, from the mental exercise involved, and from the fact that the gross errors which are constantly happening in the course of mechanical parsing are in large measure excluded. "The whole application of grammar becomes simply and directly an exercise on the meaning of the passage, and most desirably halts whenever the thread of thought is lost."[1]—(4.) Very much time is often lost in school by the habit of treating all the words in a sentence as if they were of equal grammatical importance. It may be necessary to take notice of every word for some time with a young class ; but a larger amount of useful work will be performed in an advanced class, if it be accustomed either to pass such words as articles, many prepositions and conjunctions, and even some nouns and pronouns, which must be so thoroughly known as to present no mental exercise whatever, or to parse such words together in phrases, and be led to fix its attention on what are really the critical words in the structure of the sentence.

[1] *Min. Counc.*, 1852, 1853, 1857; Dr. Woodford's *Reports*.

323. Time required for this Instruction.—It is more difficult to define this second stage of instruction in respect of the time it should occupy, than the former one. The pupil may find adequate mental exercise in syntactical parsing as long as he continues at school; for he may be occupied with passages or compositions, both prose and verse, whose constructions will task even the most advanced to analyse. Still we must contemplate a point in his progress at which he shall be prepared to enter on the third and highest stage of grammar; and, without saying that he has no longer room for applying the knowledge already acquired in this stage, or that in acquiring it he has done nothing to prepare himself for what still remains, we may say that after about three years' training to syntactical parsing, *i.e.*, at about twelve years of age, he should be ready to enter on the study of 'Analysis of Sentences.'

THIRD STAGE.

324. Third Stage.—The earliest lessons in grammar are, as we have seen, based on the sentence; so that the structure of sentences, not only of the simple sentence but (as in illustrating the conjunctions and relative pronouns) to a smaller extent of the complex sentence, has already been considered. And yet, while the parts of speech can only be understood with reference to their function in the sentence, and must therefore have their explanation grounded on a perception of the structure of the sentence, it must be apparent that what is called the 'analysis of sentences' cannot be entered upon without a previous familiarity with word-parsing. Its very nomenclature cannot be understood except by one who is capable of distinguishing and classifying the notions which speech expresses; not only as these are expressed in the more palpable forms of 'subject' and 'predicate,' but in the variety of subtler forms which are designated as 'attributes;' and no one can see the force of such terms as 'noun-sentence' or 'adjective-sentence,' who is not familiar with what is denoted by the noun-word or adjective-word. There is thus an apparent contradiction; which, however, is of easy explanation. The knowledge of the sentence which should precede the study of the parts of speech is no more than that practical knowledge which

results from the use of language: the knowledge of the sentence we now speak of is that which results from a study of the rules which regulate construction.

325. Preparation for Analysis of Sentences.—We have seen how the pupil is prepared for his earliest instruction in grammar. In course of the oral lessons with which he is so largely occupied in the first period of his school-attendance, his attention is specially directed to the meanings of words; he learns to distinguish different kinds of them, and so has little difficulty in subsequently attaching to these their appropriate names, such as noun, adjective, adverb, and the like. In a similar way should he be prepared for studying the structure of sentences. When he enters on this study, he has had much practice in reading, and the teacher's daily examination has accustomed him to consider the meaning of what he reads. Sentence by sentence, he is questioned upon the text. If an *object* is spoken of, he is expected to observe, and to state in his answers, the qualities or the actions which are affirmed of it; if an *action* is spoken of, he is expected to observe and state the circumstances of time, manner, cause, and the like, in which it is performed. He is thus accustomed to weigh the force of the several parts of a sentence; of its words or phrases if it be a simple sentence, of its constituent members if it be a complex sentence. He thus knows that in the former the *qualities* or *acts* of a thing are denoted, not simply by a single word (adjective or participle), but by phrases consisting of a number of words equivalent in power to a single one; and that the circumstances of an action, such as its time, place, manner, and the like, are denoted in various other ways than by a single word the adverb. So in the complex sentence, he has learnt that a subordinate sentence introduced by *who* or *which* denotes a quality of some person or thing, and that others introduced by *when*, *how*, or *because*, denote respectively circumstances of time, manner, or reason. In this way he obtains a conception of the nature of all the sentences that are in use; and will have the less difficulty in naming and classifying them when he commences his 'Analysis.' He is familiar with the thing signified before he learns the signs; his acquisition of the forms of language is based on an understanding of their sense.

326. The Simple Sentence.—The simple sentence is the

standard to which everything must be referred in the study of grammar. Taken at first as the starting-point from which the pupil begins to learn the parts of speech, it is now again the starting-point from which he proceeds to study the structure of sentences. An exhaustive analysis of its possible forms is the foundation of all knowledge of this subject; for from it the complex sentence of whatever sort is evolved. The parts in the one are the germs of those in the other, whether we regard their number, character, or connexion. The teacher will therefore find it expedient to dwell on the simple sentence with a minuteness which seems out of proportion to its importance, if that is estimated only by the frequency with which it actually occurs in written language. First of all, the pupil must be made familiar with the various forms assumed by the two fundamental notions whose union constitutes the sentence, those expressed by the Subject and Predicate, including under the latter the Object when there is one; and then with the still more various forms into which the attributes of these three parts may be thrown.

So that—to use symbols for the sake of brevity—if S, P, and O denote the Subject, Predicate, and Object respectively; s, s_1, s_2, s_3, etc., the various forms of the attribute of the Subject (adjective, prepositional adjunct, participial phrase, etc.); p, p_1, p_2, etc., the various forms of attribute to the Predicate (adverb, prepositional adjunct, etc.); o, o_1, o_2, etc., the various forms of attribute to the Object (adjective, prepositional adjunct, participial phrase, etc.); and if consequently the formula Ss s_1 s_2 s_3 s_4 s_5, Pp p_1 p_2 p_3 p_4, Oo o_1 o_2 o_3 o_4 o_5 comprise all the forms of the simple sentence, he should be able to say with precision what formula represents any sentence he may meet with; *e.g.*, that the sentence—

> 'Him the Almighty Power
> Hurled headlong flaming from the ethereal sky,
> With hideous ruin and combustion, down
> To bottomless perdition,'—

finds its exact notation in the formula Ss Pp p_1 p_1 O o o_2; or that this other sentence, 'The placid waters of the lake glistened brightly under the rays of the morning sun,' is accurately denoted by the formula Ss s_1 Pp p_1. And he should be able to construct sentences after the pattern embodied in any given formula.

The analysis exhibited in these formulæ corresponds to the 'General Analysis' given in 'Morell's Grammar and Analysis,' p. 81 :—

Subject with Attribute.	Predicate.	Object with Attribute.	Extensions of Predicate.
The Almighty Power	hurled	him headlong flaming from the ethereal sky,	with hideous ruin and combustion, down to bottomless perdition.

but a complete analysis of the sentence should give in addition the logical character of the parts and the degree of relation existing between the subordinate members and the principal ones; thus (see as above)—

No.	Part.	Function.	Character.	Relation to Subject or Predicate.
1.	The Almighty	Attribute to Subject.		I.
2.	Power	Subject.		
3.	hurled	Predicate.		
4.	him	Object.		I.
5.	headlong	Attribute to Object.		II.
6.	flaming from the ethereal sky,	Do.		III.
7.	with hideous ruin and combustion,	Extension of Predicate.	Manner.	I.
8.	down	Do.	Direction.	I.
9.	to bottomless perdition.	Do.	Place.	I.

327. The Complex Sentence.—The importance of studying well the simple sentence appears from the fact that all sentences of more complicated structure are derived from it by one or other of two principles. Thus, taking the term *complex* in its narrowest sense as applied to a sentence having one principal, and one or more subordinate, members, its forms spring from those of the simple sentence by a principle of *substitution*. Every part of the simple sentence, with the single exception of the predicate itself, may have its place supplied by a *sentence*. Substitution for the adjective gives the adjective-sentence, as when we render the sentence 'the virtuous man is happy,' in this form 'the man who lives virtuously is happy:' substitution for the noun gives the noun-sentence, as when we render the sentence 'success depends on our own exertions' thus, 'whether we shall succeed or not depends upon how we exert ourselves:' and substitution for the adverb gives the adverbial sentence, as when we render the sen-

tence, 'The messenger returned without delay,' 'The messenger returned as soon as he had performed his business.'—Taking the term *compound* in its narrowest sense as denoting a sentence with two or more principal members, we see that all its forms arise from those of the simple sentence by a principle of *combination*. And if we consider those sentences which are at once complex and compound—*mixed* as we may conveniently term them—we find them formed from the simple sentence by a union of the two principles already named. It is obviously with the complex sentence that the learner will experience most difficulty; but, when he has mastered its structure, he should have no trouble with that of the two other kinds. And with a view to his understanding of the complex sentence, he must study it in the first instance as thus connected with the simple sentence. The notions expressed in both are the same in kind; they differ only in the forms in which they are expressed. He should therefore be exercised on them as thus connected, till he has facility in forming complex sentences of different sorts out of simple ones, and in reducing complex sentences back again to simple ones. He cannot be said to understand the subject at all, unless he sees clearly in what sense the complex sentence corresponds with the simple, and in what it differs. It may be noticed by the way that the exercise now adverted to, besides being required for his knowledge of analysis, has an important bearing on his progress in paraphrasing. (§ 333.)

328. Scheme of Analysis.—The analysis of a complex sentence is twofold, general and particular: the former gives the character of the several members as wholes, the latter analyses these members individually. Both are necessary to a complete view of a sentence. It is virtually impossible to analyse every sentence which occurs under both these aspects, from the time which the process would occupy: the purpose of the particular analysis is served if it be applied in those sentences, or members of sentences, which present some difficulty, and with sufficient frequency to accustom the pupil to the process. It may be observed that the difficulties which it is called on to explain will be found to be mainly in the conjunctional and pronominal words which form the links between the members of the complex sentence: to which accordingly special attention should be given. Referring for de-

tails to the text-book already quoted, we shall here only exhibit a scheme for the complete *general* analysis of the complex sentence :—

No.	Sentence.	Function.	Character.	Connexion.	Rank.
1	Thus saying, rose the monarch	Principal sentence.			I.
2	and prevented all reply; prudent	Do.		Co-ordinate with 1.	I.
3	lest, from his resolution raised, others among the chief might offer now (certain to be refused)	Adverbial sentence.	Purpose.	Joined to predicate of 2.	II.
4	what erst they feared,	Noun-sentence.		Object to 3.	III.
5	and, so refused, might in opinion stand his rivals, winning cheap the high repute	Adverbial sentence.	Purpose.	Co-ordinate with 3.	II.
6	which he through hazard huge must earn.	Adjective-sentence.		Qualifying the object in 5.	III.

The features which were insisted on as necessary to good word-parsing should not less characterize analysis of sentences: and there is the same room, and the same urgency, for those qualities of teaching already noticed as essential to success in handling elementary grammar. They need not here be repeated; but the student should refer back to § 322 in this connexion.

CHAPTER V.

COMPOSITION.

329. Constructive Power over Language.—Familiarity with a language implies, in addition to the power of reading it with intelligence, that of using it for the expression of our own thoughts. The one of these is a necessary means to the other, but by no means implies it. To use a language well whether in speaking or in writing, there are required a closeness of observation, a fulness and readiness of memory, and an acuteness of discrimination beyond what are required to read it. For we have not simply to recognise what is set before us and to gather up the force of individual expressions, in which we are much aided by the whole

collocation of words and by the context: we have, out of the various forms offered by the language for expressing the same idea, to select that which expresses it best; which requires not only a thorough acquaintance with the idioms and regular constructions, but a very lively and familiar retention of them. It may well be doubted whether the importance of a training to this use of language is sufficiently felt in elementary education; its importance, on the one hand, as a means of giving strength and fixity to the results of general study, or, on the other, as influencing the pupil's prospects in life. It is advisable, therefore, to give a detailed statement of the means which the common school has for giving the pupil this constructive power over language; and this is what we have in view when we speak of instruction in 'Composition.'

330. Means of Teaching Oral Composition.—Oral composition may be cultivated from a very early period, indeed, from the beginning of the pupil's school-education; and whatever degree of facility he attains in it will secure his more rapid advancement when he enters on the study of written composition. This facility depends, in the first instance, on the example set before him for imitation, and then on the nature of the practice which he receives.

All that the teacher addresses to his class, his questions, his mode of dealing with answers, his explanations, his narratives, the stories he recites to them, and his conversation with them privately, influence their power of expression. If in his intercourse with them, whether professional or personal, he habitually use language which is correct, clear, and fluent, then undoubtedly he takes the most effectual of all means to make them good speakers. And this may suggest the impropriety of his addressing them exclusively in questions or answers: he should take frequent opportunity of addressing to them longer communications, that they may have before them models of continuous expression. If this were not necessary for the exposition of his subject, it would be so with a view to their progress in the use of language.

It is in their answers to his questions that the teacher has the means of accustoming his pupils to express themselves well. Children are very apt, either from timidity or from indolence, to give only partial answers, in fact, to indicate rather than to give

answers; to put off the teacher with the smallest possible number of words, in the hope that he will take the trouble of putting their thoughts into shape. And such is their perseverance in this matter that, unless he is of a decided and exacting temperament, they generally succeed. From the very first he must strive against this habit of fragmentary answering. Doubtless he must carefully graduate his expectations; he must be satisfied at first with single words, but, in a short time, he is justified in expecting phrases and even simple sentences. We have seen how this is to be encouraged in the period of infant-school work. And as the habit of full and explicit answering grows upon them—for it is a habit—he should rise in his demands: until in the case of his advanced pupils he receives answers which consist of a number of sentences or paragraphs. His questioning in senior classes should be so framed as to give scope for much answering of this sort; not less from the comprehensive character of mental exercise which it requires of them, than from the practice it gives in arranging and expressing their ideas. This kind of questioning is not peculiar to any one branch of instruction; it is not less suitable in the investigation of the reading-lesson than in the lesson on geography, history, or even in arithmetic. (§ 265.)

Direct instruction is also available for the object now in view, though in a subordinate degree. For, on the one hand, all the errors which the pupil makes in speaking should be corrected by the teacher, and the reason given when the case admits of one; and, on the other, his study of grammar gives the teacher special opportunity for impressing the correct forms of the language.

331. Means of teaching Written Composition.—Exercises in written composition naturally follow the attainment of some facility in oral. It is but a moderate degree of skill in this art, however, which the elementary school can give, even though the pupil's attendance be comparatively long; for he has not at this period the maturity of mind required for its higher aspects. Still much can be done by example, instruction, and practice, to accustom him to its two fundamental requisites, to wit, the arrangement of ideas, and correct expression.

Correct writing, like correct speaking, is, in the first instance, a matter of imitation; though this is much overlooked in school. The pupil should therefore have good examples of composition

before him, that his eye may be accustomed to the mechanical divisions of sentence, and his ear to the idioms and general rhythm of the language. He has seldom more of these than what are contained in his text-books, particularly his reading-book. But these may do much; for, though limited in amount, they are read again and again so as to become very familiar to him. The influence which they exercise may suggest the great importance of their own style being excellent. That teacher would act wisely, however, who encourages his pupils to read beyond their text-books. The advantages of this practice, and the means for giving effect to it, have been already pointed out (§ 290). It is only necessary here to repeat that the teacher should interest himself judiciously in their reading, if he would reap the full advantage which he contemplates from the practice. In addition to reading much, the pupil should learn by heart selected passages, both in prose and in verse. The advantages of this practice have also been already specified (§ 292): it influences the pupil's progress in composition in this way, that these passages remain permanently in his mind as good models.[1]

Auxiliary to reading is the analysis of what is read; the analysis both of the sentences and of the sense. The former accustoms the pupil to all the possible forms of sentences, leads him to notice the reason of their clearness or of their obscurity, and shows him the limits of complexity within which a writer must keep in order to be understood. The latter is important in its bearing on composition, as exhibiting the adaptation of the language to convey the writer's thoughts, but chiefly perhaps as the great means by which the school may cultivate in the pupil a perception of what is implied in the just arrangement of ideas.

The various kinds of 'composition-exercises' may conveniently be ranked under two heads:—(1.) Those which are simply exercises in the forms of language, and (2.) those which are exercises in language and in the thought at the same time. But regarding both of these, it is to be remarked that by themselves they may easily be overrated. Practice is valuable only when good models are exhibited for its guidance. The exercises in question give occasion to the pupil for showing how he can compose, and therefore for having his excellencies confirmed and his faults cor-

[1] *Min. Counc.*, 1857, p. 723.

rected; but they do not give him that command of expression in which the power of composition lies: reading alone can do that; and hence the prominence already attached to reading in connexion with this subject.

332. Exercises in the Forms of Language.—Of exercises in the forms of language, there are two principal kinds—(1.) There are the exercises, oral and written, in sentence-making which are given in the course of the instruction in grammar and analysis; which should be taught from first to last with a view to forward the pupil in composition. (2.) There is the exercise known as 'Writing to Dictation,' designed to test the accuracy with which the pupil has observed the mechanical frame-work of sentences in his reading. The chief conditions of this important exercise are the following (§ 300):—

The style of the passage dictated should be simple and clear; the best materials for the purpose being easy narrative. When an intricate prose or poetical style is employed for this purpose, the exercise is not given as practice in composition, but with some special grammatical design. A systematic correction of errors has already been mentioned as essential to the value of the exercise. The mode of doing this which will be found most generally expedient is the following:—The pupils having exchanged copies, let the teacher take one in hand, and go over the passage slowly with the class, calling attention to the errors which are likely to have been made; let him have different marks agreed upon for the different kinds of errors, *e.g.*, for errors in spelling, the numerals written through the words, as *judgment, excellent*, a vertical line | for errors in punctuation, a cross × for errors in grammar, underlining for omissions, and a double vertical line ‖ for errors in the use of capital letters; let the errors of different kinds be tabulated at the bottom of the exercise, the more important ones (particularly of spelling) being corrected on the board; and let the exercise be brought next day with the errors corrected, the passage being entirely re-written when these exceed a certain number. To do justice to this exercise, nothing should be dictated which is not fully, and even easily, understood by the pupils. The simple copying out of passages from the reading-book will often be found a more convenient form of this exercise for the teacher; and should be practised along with dictation in any case. For writing to dictation is but the test of that acquaintance with language which the pupil must acquire through reading and transcription. The sentences should be read distinctly and intelligently, first in whole, and then in clauses, shorter or longer, according to the capacity of the class, but without undue repetition. The efficiency of this exercise should not be judged of by its quantity, but by its

quality: that is to say, by the care with which the writing is performed, and the errors explained and corrected. It is not necessary that it should be performed daily.

333. Translation or Paraphrasing.—Of the higher kinds of composition-exercise there are two principal kinds:—(1.) Translation or paraphrasing, and (2.) Prepared composition in the strict sense of the term.

One form of translation in common use is the making of abstracts or reports. The teacher reads a passage slowly to the class, and expects them to give an account in their own language, at least to a certain extent, of what they have heard. The difficulty of the exercise lies in maintaining the proportion of thought in the abstract. The teacher may give the class more or less assistance according to their advancement, by noticing what are the most important ideas as he proceeds. In any case he is bound to give them all the assistance they may derive—and that is not small—from an expressive reading of the passage. The more common form of translation, however, is that which is known as 'Paraphrasing;' in which the writer is required to reproduce in his own language, not merely the general sense of a passage from hearing it read, but the precise sequence of thought after personal study of it. This is an exercise of great value to the advanced pupil; being the nearest approximation possible in a mere English education to that of translation from the Latin or Greek, which confers so much benefit on the classical student. Its design is twofold: to accustom the pupil to an exact appreciation of what he reads, and to give him an accurate and familiar acquaintance with the resources of expression. At the same time it is a difficult exercise; requiring for its successful performance an acute observation to discern the order of thought in a passage, sound judgment to maintain its just proportion, and no small skill in the use of language to preserve in the version something of the expressiveness of the original, avoiding equally that luxuriance of style which weakens or conceals the sense, and that meagreness of mere verbal substitution which destroys it. The habit of altering the forms of sentences, which has already been recommended in teaching analysis, prepares the pupil in a certain way for paraphrasing; but it is dangerous to exaggerate its value. For, as regards this exercise, it is little more than a mechanical help; on

which if the pupil place his main reliance, as he will be apt to do, he can never attain success. Good paraphrasing cannot be performed by any mechanical rules; it takes its complexion in all cases from the general cultivation of mind in him who attempts it. If the teacher, therefore, in all the lessons of the school, and particularly in the reading-lesson, is careful to exercise the intelligence of his class both in thought and expression, he will find his advantage when they attempt this or any other form of composition. One direct assistance he can certainly give: he can take illustrative examples and comment upon the considerations which should determine the form of their translation. The ordinary work of correcting his pupil's versions will suggest to him abundant materials.

334. Original Composition.—This may be practised in school under various forms. The teacher may require from the pupils a report of some oral lesson he has given, or, it may be, of some lesson from the reading-book. Again, he may prescribe some subject beforehand on which they are to inform themselves, and require them to write an account of it in school. Where the habit of private reading is encouraged, this exercise may be conducted with special facility and advantage. Generally speaking, however, exercises in original composition are given out to be performed leisurely at home: in which case success will much depend on the following conditions:—(1.) Although home-exercises of a certain sort may be commenced very early, the exercises in question should not be prematurely prescribed: the pupil cannot be expected to attempt original composition till he has had much practice in listening to spoken language and in reading written.—(2.) The subjects should be familiar, and suited to the advancement of the class. At first the information required should be within the pupil's reach by the exercise of his observation and by conversation at home, as it is evidently in the case of subjects like these:—"Describe any of the uses of the dog, the horse, or the cow;" "Write down what you have seen of the sparrow, swallow, or robin;" "Describe the parts of a cart, a plough, or a ship;" "Describe the process of getting coal, iron, or lead;" "Describe any familiar flower, or tree, or useful vegetable;" "Describe the occupation of the sailor, shepherd, farmer, or miner;" "Describe any of the four seasons;" and such like. At a more advanced

period the subjects should be such as to require him to employ his imagination or his judgment on what he reads or on what he is taught at school; but still of a familiar sort.—(3.) It is expedient that they should be prescribed in connexion with the school-work; either as the preparation or as the conclusion to some part of instruction. Their interest and utility will be found to be greater in such circumstances.—(4.) The teacher will generally find it advisable to give some assistance beforehand; it may be either as to the plan on which he desires the exercise to be performed, or as to the most material topics of information required by the pupil. Nothing can be more profitless than to prescribe exercises whose scope is indefinite, and which are beyond the power of the pupil to execute with even tolerable success. And after they are written, they should, in common with all other written exercises, be subjected to careful correction.—(5.) There is one form of this exercise that should receive attention in all schools, viz., letter-writing: by which is meant not commercial letter-writing such as generally falls in the pupil's way in the course of his instruction in book-keeping, but that which is required in the ordinary business of life. It is inexcusable that the pupil should leave school without some acquaintance with the forms of this most necessary art. To initiate the pupil into it the teacher should analyse some examples of good letter-writing; distinguishing between the information which it is written to convey, and those commonplaces and courtesies held essential in such communications. It would not be unreasonable that he should look to the school reading-books to contain examples suitable to his purpose. After such analysis, he can easily, by the exercise of a moderate share of ingenuity, throw some of his oral lessons on familiar subjects into the epistolary form on the board, and draw on his imagination or that of his class for the supplementary commonplaces and courtesies. Finally, he should frequently require from the class written exercises in this form.

CHAPTER VI.

WRITING.

335. Elements of Good Writing—Legibility.—The tests of good writing are three: (1.) Legibility, (2.) Beauty, and (3.) Rapidity. The elements of letters on the formation of which these qualities depend may be reckoned as the following:—Slope, height, width, thickness, curvature, and mode of junction.

Why do we use script characters at all as distinct from print, since they are less distinct? It is because the separation of the characters as in print would take too much time to execute in writing. Script-hand is a compromise; we sacrifice legibility to some extent to save time. The requirements of legibility—which are suggested chiefly by contrasting script with print—are these:—

1. Curvature is plainer than angularity. Print characters are curved; so are those used in common script: an agreement which may be held as conclusive. If further evidence be required, a comparison of the curved with the angular script abundantly supplies it. With a view to legibility, therefore, the round hand should be taught in school to the exclusion of the angular.

2. Upright characters are more legible than sloping. Common print is upright; and it is plainer, as every one sees, than sloped or italic print. Why then is the script-character sloped at all? The answer again is, that writing is a compromise between certain opposites; we sacrifice legibility to some extent that we may gain time, the sloped line being more easy for the hand to form than the upright. But the rule may be expressed thus:—the less sloping we make the characters the better. A much sloping style should be discouraged: it is indistinct and is not redeemed by any saving of time, owing to the greater length of the lines employed in forming the letters.

3. Legibility requires simplicity of outline. The print-characters are models in this respect. A comparison of the German or Old English characters with those of common script shows that what is added in the way of ornament detracts from distinctness. The pupil should therefore be required to form the characters with a perfectly simple outline. Ornament should be reserved for ornamental writing or caligraphy, which is a department of the art useful enough in its own place, but that place is not the common-school.

4. Legibility requires a certain proportion to be observed between the height, width, and thickness of the letters. If the height be too great for the width, the closeness of the letters perplexes the eye. If the width be too great for the height, the eye has further to travel to gather up the sum

of the whole. In either case distinctness is impaired—the want of proportion in the lengths of the parts of certain letters is a common cause of indistinctness: *e.g.*, in the d, t, l, q, g, etc. If the lines or loops are made too long, they wander into the writing above or below, and the whole assumes a tangled appearance.—In the matter of thickness, various faults are committed:—(1.) The lines may be too light for the size of the letter, which makes the 'scratch' hand. (2.) They may be too thick for the size, which makes the 'heavy' hand; or (3.) There may be a strong and irregular contrast between light and heavy in the same line, which makes the 'jerking' hand, the most indistinct of the three.

5. Since we have adopted a set of characters for script hand which are intended to be run into each other, legibility of script requires that the *letters* shall be properly joined, whilst the *words* must be properly separated. All the characters and parts of the characters, therefore, which admit of it, should be formed by one continuous motion of the hand.

336. **Beauty of Style.**—Beauty of style must presuppose legibility: we cannot tolerate the pretensions of any style to be called beautiful which perplexes us in reading. Beauty is twofold: (1.) that of design, and (2.) that of execution. Regarding the latter it is enough to say that it exists, when the various lines are drawn regular, smooth, and well-proportioned. The former requires more remark. The lines used in writing are either straight or curved. The straight line we may call correct or regular, but we do not call it beautiful: it is on the management of the curve that all beauty of design depends. But, again, curves may be subdivided into those of the same flexure and those of contrary flexure: of the two leading types of the former, viz., the circle and the ellipse, the circle is the more perfect curve, that is, the more regular and equable, whilst the ellipse is recognised as the more graceful. It will be found, accordingly, that in a good style of writing the curves are all moulded on the elliptical outline: this will appear from an analysis of almost any of the small letters. The curve of contrary flexure or double bending, thus $\int$, is also a graceful curve: it enters largely into the formation of the capital letters, along with the ellipse. The most prevalent faults in capitals will be found to result from a departure from the character of these curves: in particular, from allowing the former to degenerate into the straight line, and the latter to approximate to the circle.

337. **Rapidity.**—This test is practically inapplicable during the

period in which the pupil is learning to write. He must write legibly and neatly, at whatever expense of time, before he thinks of writing quickly. Still, in determining the style of writing which he should acquire, it is proper to give due consideration to those features which it will be necessary for him to adopt, when the time comes for him to write rapidly. It happens that the conditions of rapidity are for the most part the same as those of legibility and beauty, thus :—(1) the round hand is quicker than the angular, (2) the less sloping than the more sloping, (3) the simple in outline than the complicated or ornamental, (4) the regular and uniform than the irregular and jerking, (5) the well-joined than the disjointed.[1]

A knowledge of the qualities of good writing will enable the teacher to guide the efforts of his pupils, even though he has not himself a high degree of skill in writing. But he should aim at acquiring this as much as possible : for, though it will not secure, it has great influence on, his success in teaching. It operates both directly and indirectly ; directly, in respect that it enables him to present better models for imitation, and makes him alive to faults which he would otherwise overlook, or not justly estimate ; and indirectly, inasmuch as he will certainly value this branch of instruction more highly, and be more interested in teaching it. If experience shows that one need not despair of teaching well who cannot himself write well, it is still not to be doubted that, however well one may teach without practical skill, he will teach all the better with it.

338. Mechanical Aids to the Teaching of Writing.—Before adverting to method in the strict sense of that word, certain conditions of a mechanical sort must be insisted on as indispensable to the success of any method whatsoever. Self-evident though they are, it is to the neglect of them that we must often ascribe that failure of which the teacher suspects the cause to be in his method.

There should be a proper adjustment of the furniture used for writing upon : both of its parts to each other, and of the whole to the age of the pupils. The writer, when seated, should be perfectly steady, and have complete command over his materials. If the bench be too high and without support for the feet, the writer's position must be unsteady and his work of the same character : if

[1] St. Martin's Hall Lectures, 1853, H. Grant on Penmanship.

the desk be too high for the bench, he will not have control over his arm in writing. The desk should have its edge on a level with the writer's elbow when he is seated; should be sloped but slightly; and should be broad enough to prevent the copy-book from folding over its outer edge, when the writer comes to the bottom of his page. It is obvious that the same furniture will not suit young and advanced classes. The desks should be arranged in the following way:—(1) not round the walls, but in parallel rows, to allow the pupils at any moment to observe the teacher's illustrations on the board without changing their position; (2) if not under a roof-light, then so that the light shall fall on them from a window on the pupils' left. A moderate front-light is the next best; but light from behind, or from the right hand, is unfavourable.

The posture of the writer should be natural and easy; otherwise he may be injured in health, and his writing cannot be good. He should therefore sit upright at the desk or nearly so, not leaning his breast on the edge of it but turning the left side slightly towards it, steadying the body by resting the lower part of the left arm on the desk, and having his right arm free to support its own weight on the wrist and the third and fourth fingers. If he is allowed to bend forward or to twist his posture in any way, his point of view is such as to prevent him from judging of the qualities of the work he is performing. His position once assumed, it should be disturbed throughout the lesson as little as possible: for which purpose all the pupils should be in their precise places at the beginning of the lesson, and the ink-wells should be easily within reach. This matter of posture should be attended to very carefully at the outset, when it is as easy for the pupil to adopt the right one as the wrong: a bad habit will become very difficult to correct.

339. Materials for Writing.—The materials used in writing should be good and kept in good order. Paper thin or rough, pens ill-pointed, ink light and watery or muddy, do not give the pupil fair-play in his endeavours. It is a false economy which stints the supply of good materials.—Then the teacher should have very explicit arrangements to secure their proper keeping. To prevent the copies from being crumpled, they should be delivered to, and taken from, the pupils whilst still at the desks:

some one, assistant or monitor, should have it in charge to cover up the ink-wells at the close of the lesson: more especially the filthy habits often formed by the pupils in removing the ink from their pens should be excluded by the teacher requiring the use of the damp sponge either by themselves or by a monitor. By a very simple apparatus, the teacher may secure—what is a point of some importance in the circumstances—that each pupil shall have his own pen as well as his own copy-book. Such arrangements should be attended to both for economy and from moral considerations.—Finally, the pupil should be taught to use his materials properly: *e.g.*, to hold the pen lightly yet steadily between the thumb and the first and second fingers at a certain distance from the nib, pointing to the shoulder, but so that the nib shall fall square upon the copy, the fingers which hold it being neither too stiff nor too much bent, the others quite at rest, and the hand as a whole not turned over too much upon its edge; to have his copy-book (which should not contain many leaves) square before him, neither too near him nor too far from him, somewhat towards his right hand and steadied by the left; and to use the ink in a manner not at variance with cleanliness.—These apparently trivial matters have an important bearing on his success: because they influence the disposition with which he regards his work.

340. Causes of Failure.—The success which attends the teaching of writing in school is not in fair proportion to the time occupied in it. This must arise from defect of method; for the object aimed at is definite and attainable, and there is abundance of time for attaining it. Where the method consists simply in giving the pupil a copy and requiring him to imitate it in the best way he can, it may be with an occasional general direction, it is not to be wondered that success is limited, and that in the case of any particular pupil it is a matter of accident whether he becomes a good writer at all or not. Such a method—if indeed it can be so called—depends on the practice which it gives the pupil, and on nothing else; it uses imitation only nominally, for it takes no pains to secure that he knows what he is imitating, and it deals very sparingly with precept. But practice alone cannot lead to success, either in teaching writing or any other branch. (§ 284.)

Even the practice which is given in this case is too often ill-

regulated; engaging the pupil with what is complex before it has presented him with what is simple, and confining him to exercises which are merely formal, instead of including those of a more interesting kind in which he has to apply his writing to the expression of his own thoughts.

Various methods have been proposed for teaching writing; which agree in the importance they attach to imitation, but differ as to the principle on which this imitation is to be effected. In some it is more mechanical, in others more intelligent and free.

341. Locke's Method.—The following method is sometimes associated with the name of Locke, being recommended by him in these terms: "These practices (*i.e.*, of the proper posture and use of materials) being got over, the way to teach him to write without much trouble is to get a plate graved with the characters of such a hand as you like best. But you must remember to have them a pretty deal bigger than he should ordinarily write; for every one naturally comes by degrees to write a less hand than he at first was taught, but never a bigger. Such a plate being graved, let several sheets of writing paper be printed off with red ink, which he has nothing to do but go over with a good pen filled with black ink, which will quickly bring his hand to the formation of those characters, being at first shown where to begin, and how to form every letter. And when he can do that well, he must exercise on fair paper; and so he may easily be brought to write the hand you desire." A contrivance of this sort may be useful to a small extent in any method, and is employed more or less in several copy-books in common use; but few will profess to consider the art of writing so extremely mechanical a process, as to accept of this contrivance as the whole method of teaching it.[1]

342. Mulhaüser's Method.—The method promulgated by Mulhaüser of Geneva (1830) reduces the written characters to certain elements which it requires the pupil to practise from dictation, and then classifies them according to the manner in which they embody these elements. By the manner of ruling the copy-book, moreover, it gives him the means of forming the characters by accurate measurement of their parts. It may be comprehended from the following brief outline.—Its analysis of the small letters

[1] Locke, sec. 20.

is comprised in a series of about twelve lessons or rather stages, on each of which the pupil may be occupied for a longer or shorter time. Thus in lesson 1. it would be taught that two sorts of lines are employed in writing, the straight line (upward and downward), and the curve (to the right or to the left); and that from these two lines proceed the four elements out of which (with slight exceptions) the whole twenty-six are formed, viz., the straight line /, the curve ( ), the loop ƒ, and the crotchet ⌒. —Lesson 2. deals with the straight line, teaching that it is of different lengths, though of uniform slope (see diagram).—Lesson 3. explains the *link* or curve which joins two consecutive straight lines towards their lower extremity. Proceeding from the first at one-fourth of its height, it joins the second at one-half its height. Letters which exemplify it are the *i*, *u*, *t*, and *l*. —Lesson 4. exhibits the *hook* or corresponding curve which joins straight lines towards their upper extremity, as shown in the *n* and *m*. As each lesson is free to embody anything taught in the preceding, the *p* and the *h* may be included in this one. And thus words may now be formed, as *him*, *until*, *pint*, etc.—Lesson 5. introduces curved letters; the *single upper* curve proceeding from a point above the half-height towards the right, and terminating at a point below the half-height again; the *single under* curve, occupying a reverse position; the double curve forming the complete ellipse within the space. The letters, *c*, *e*, and *o*, are practised in this lesson.—Lesson 6. exhibits letters formed by combining the curve with the straight line and the link, as the *a*, *d*, and *q*.—Lesson 7. includes letters formed as in the preceding, but involving, in addition, the *loop*, such as the *j*, *g*, and *y*. —Lesson 8. introduces letters with the *crotchet*, a peculiar curve lying quite above the half-height, and occupying one space in breadth; such as the *b*, *r*, and *v*.—Lesson 9. explains certain letters which combine the elements in an exceptional manner, as the *k*, *s*, *x*, and *z*. From this sketch, the nature of the analysis may be sufficiently understood; each step is practised till familiarity is acquired, the previous ones being combined with it at discretion, so as to form words. When the analysis is exhausted, the pupil still writes to dictation, *i.e*, according to a dictation of the elements of the letters; as in the following example:—If he were to write the word 'dictate,' he would do so, not from copy, but

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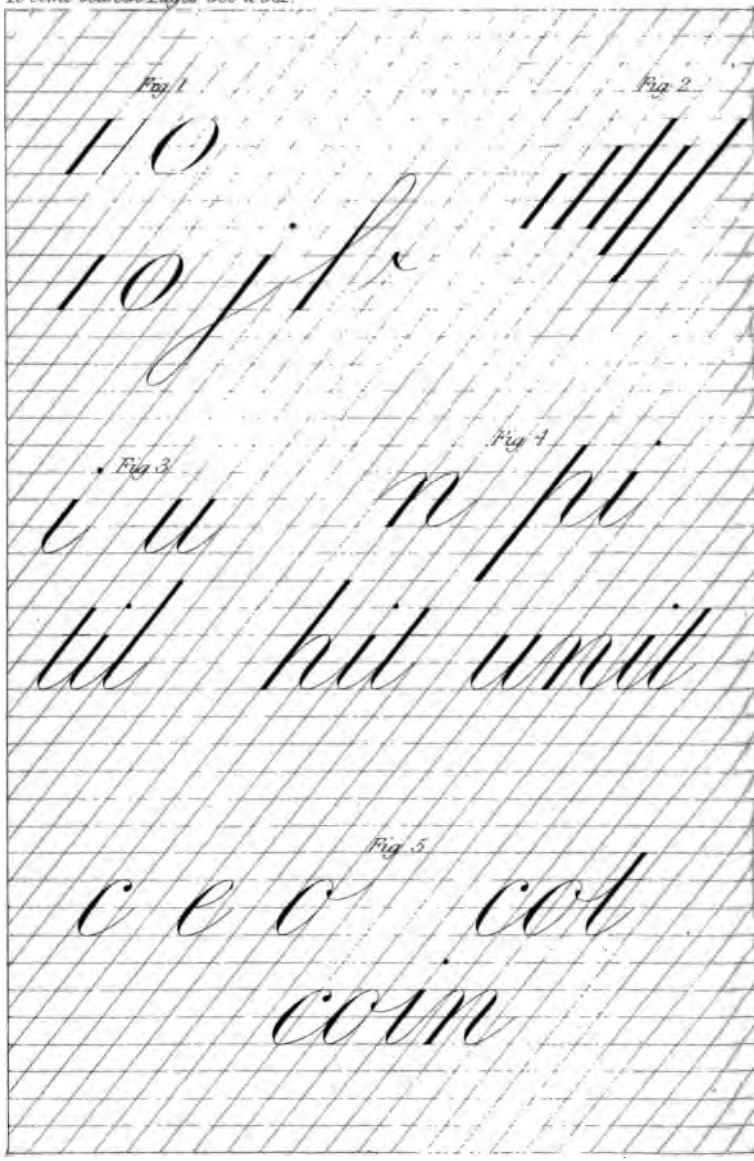

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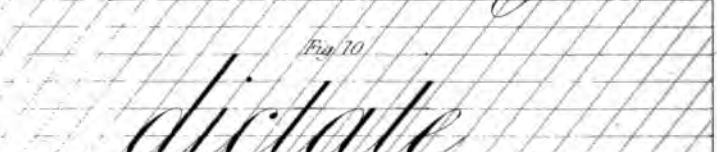
Fig. 6

Fig. 7

Fig. 8

Fig. 9

Fig. 10



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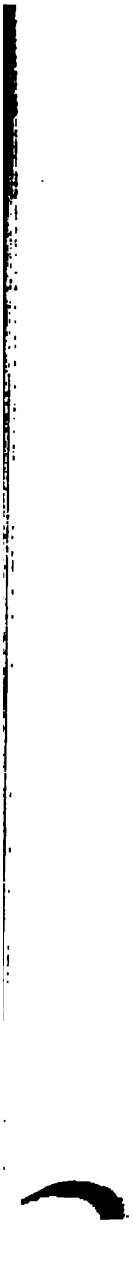


from dictation of its several letters in this way: double-curve, straight line two heights, link (d); straight line, link (i); curve, link (c); straight line height-and-a-half, link, bar (t); double-curve, straight line, link (a); straight line height-and-a-half, link, bar (t); loop, curve, link (e); the whole forming the word *dictate*.

343. **Estimate of the Method.**—The method is thus characterized by those who first introduced it into this country under the sanction of the Committee of Council on Education. "The method of Mulhaüser consists in the decomposition of the written characters into their elements, and the classification of these elements, so that they may be presented to the child in the order of their simplicity, and that he may copy each of them separately. The synthesis, or recomposition of these elements into letters and words, is the process by which the child learns to write. He combines the forms which he has learned to imitate. He recognises each separate form in the most difficult combinations, and, if he errs, is immediately able to correct the fault. . . . The method enables the child to determine, with ease, the height, breadth, and inclination of every part of every letter. It would obviously be difficult to do this by rules alone, and such rules would not be understood by children, and would not be remembered without much effort. The method leads the children to the result by practical expedients, and such rules as are desirable to rationalize these expedients are easily remembered as appendages to that which is recorded in the child's experience, though the rules would probably be forgotten, if such practical demonstrations did not precede them." The method correctly appreciates the errors of former teaching, when it states them as two, viz., requiring the children to perform the complex before the simple, and accustoming them to imitate the letters mechanically instead of intelligently; but we need not now hesitate to say that, with all its plausibility, it fails to apply the true remedy. It fails, in the first place, from its being too rigidly a synthetic method. The analysis that is made for the first stages of elementary teaching should not descend to the smallest parts possible, but should stop at the smallest parts which the pupil can appreciate; it is with the latter therefore that synthetic instruction for children should begin, and not with the former. If we proceed beyond these

limits, we go beyond the range of their intelligence and sympathy. Hence, in speaking of reading, we rejected that method which first presented letters to the learner and asked him to combine them into words; and we proposed to commence with words, these being the smallest parts of language of which he has experience. The phonic method of reading and Mulhaüser's method of writing embody the same principle, and stand or fall together. The same principle of method which is good against the former is good against the latter. The synthetic principle, if logically and fully carried out, as it is in both of these methods, just means that theory is to precede practice in elementary education; a doctrine which will not now be maintained by any. (§ 279.) But the method before us fails in another direction. Whilst it offers a complete theory of the art of writing, the practice which it gives is extremely mechanical. So that, if the teacher can count on his pupils attaining through it a moderate average of attainment, he will be disappointed in expecting as its result a good style of the art. Writing is a species of drawing; both being the art of imitating forms. A pupil may draw a tolerably just circle with the help of a series of signal-points laid down on his paper; or by the help of a square or octagon in which to inscribe it. It is a property of the circle that it admits of being inscribed in a square or octagon; just as it is a property of the characters used in writing that they admit of being inscribed in the Mulhaüser rhomboids. But we should not regard him as able to draw the circle, unless he could do so free-hand, guided merely by his intelligence of the form itself; for which end he must practice its construction without any mechanical aids. This conclusion is independent of the question—a question that may fairly be put—which is the easier problem of the two? It may indeed well be doubted whether this system of mechanical aids does not create difficulties of a greater sort than those which it removes.[1]

344. Method which begins with Sentences.—Another method of teaching writing has been advocated which deserves a passing notice, if not for its own merits, yet as suggestive of

[1] *Manual of Writing*, founded on Mulhaüser's method, published under sanction of Committee of Council on Education; *Min. Counc.*, 1844, 'Minute on the Mode of Teaching;' and 1853, vol. ii. 837; 1853 (Union-Schools), p. 31.

a principle regarding the nature of writing-exercises which should not be overlooked in a good method. It is described by Mr. Moseley in these terms :—"The pupils do not first write *parts* of letters, then *letters*, then *words*, then *sentences*, but sentences at once. The first sentence they write is 'God is good,' and then 'God is good to all men,' and so on, each succeeding sentence being a variation of the first and an extension of it ; the result is certainly remarkable. I found infants writing this sentence well who had only been learning to write a fortnight. From an early period the skill they thus acquire in writing is applied to their instruction in other elements of knowledge. They are required to commit to memory at home, in the evening, passages which they are to write out at school on the following morning, and the less difficulty is experienced in obtaining from them this sacrifice of their leisure hours, as they attach great value to the opportunity which it affords them of practising writing." This method, which stands out in striking contrast to the one last described, relies on the motive which can be presented to the pupils to careful and diligent work in the interest they naturally take in the endeavour to write down their own thoughts, or, at least, something which they understand. It certainly involves the exercise of intelligence, sufficient, as it would seem, to make success possible in spite of the obvious complexity of the first models they imitate. But the objection to the method is this, that it does not cultivate specially the particular *kind* of intelligence which a good writing-method should cultivate, viz., *the intelligence of form*. It is difficult to believe, therefore, that favourable results as to style can be attained by it in the general case.—The unsoundness of the main principles of this and the preceding methods, will appear more fully when we consider the conditions of a just writing method ; whilst it will also appear that all the three contain expedients which may, in one form or other, be profitably embodied in such a method.[1]

345. False Tests of Methods.—It may here be remarked for the sake of the inexperienced teacher, that it should be no occasion of surprise to find all these methods claiming to be successful in practice. Almost every method for any subject which has ever been propounded makes this claim, doubtless with sin-

[1] *Min. Counc.*, 1846, vol. i. pp. 162-3.

cerity, and with a certain amount of truth. To admit this is only to admit in other words that the teacher is of more importance than his method. A cheerful, earnest, and judicious management of his pupils will secure success for him, whether his method be true or false; since it is moral considerations which determine their progress rather than the intellectual propriety of the course they are following. The teachers who have brought the writing-methods above named into notice have believed in them, and have laboured with devotion in the use of them; we must be careful, therefore, lest we attribute to the methods the success achieved by the men. We must not be led away by particular instances of success in judging of the propriety of a method for the purposes of the average common-school. At the same time, in view of these particular instances, each individual would do well to adopt that method, whatever it be, in which he has the strongest rational faith. This conclusion is confirmed when we see two methods, so opposite in their character as the two last described, claiming to have attained results equally striking.

346. Features of Good Method—Intelligent Imitation.—The most prominent conditions of a good writing-method appear to be these :—intelligence in imitation, gradation of effort in imitation, freedom in imitation, fidelity in imitation, judicious instruction in each exercise of imitation, and the sufficient application of writing to practical purposes.

The perception of form requires to be cultivated like any other exercise of the senses. The eye cannot appreciate an intricate form, if it has not been exercised upon a succession of simpler forms leading up thereto. The pupil should therefore bring to his writing an educated eye. The forms he is called on to imitate are complex; the simplest of them is so when observed for the first time. If he has not been taught to observe accurately, he cannot be expected to imitate accurately. He should know what a straight line is; in its different positions of vertical, horizontal, and slanting; he should recognise equality and difference of lengths, widths, and thicknesses; and he should be acquainted with the simpler curves, and the simpler combinations of curves with straight lines. This course of preliminary instruction, which may be easily overtaken before the period arrives for commencing writing, has already been particularly described. Without such

an experience of form he can make no progress in writing; if he does not bring it with him to this art, he must just work it out for himself in his first attempts; but his advancement will be of necessity painfully slow on this account. We may say, then, that writing should be based on drawing.

347. Gradation of Effort.—There is a further sense in which drawing aids writing. To write any of the letters is a more complex operation than to draw it; the latter requires only correct outline, the former has to add the light and shade. The pupil's efforts would be facilitated if, instead of attempting both at once, he were to take them separately. It is worthy of consideration, therefore, whether it would not be advisable to put a black-lead pencil into his hand, when he begins writing, instead of pen and ink, and to engage him for a time in drawing the letters and simple words. He would feel all the interest which he commonly feels in writing on *paper*, whilst he would be kept free from the discouragements to which the premature use of ink exposes him. It would be time enough to set him to *write* the letters when he can *outline* them correctly.—What size of letters should he commence with? It is common to confine him for a considerable time to large or text-hand; on the ground that he will learn the exact forms of the letters more accurately when he is accustomed to trace them on a large scale. The principle may be admitted; but it is very doubtful whether 'text' is not too large a size to begin with, from the comparative firmness of hand required for its execution. Half-text would seem to be a better standard, being large enough to exhibit the forms of the letters, and not so large as to overtax the pupil's hand. Next to that should be taken text-size: on every consideration small-hand should come last: though there is no reason, but the reverse, for deferring it so very long, as is generally done. For if writing is to be applied to any other department of instruction, it can only be done in small hand.—In practising the common letters, which are taken up before the capitals, for the obvious reasons of their greater simplicity and more general use, the natural order of procedure would be to begin with the straight line, as entering into the majority of letters, then the straight line combined with the curve as in the i and t, then the complete curve as in the o, and then the com-

bination of the straight line with the loop, as in the j. The letters should be taken in the order of their simplicity as composed of these elements, so that letters of similar formation will occur together. The few exceptional forms should be taken last. Single words should be introduced as soon as they can be constructed out of the characters learnt: perhaps we may say simple sentences also; from the greater interest which attaches to the exercise of writing when thus presented. When the pupil has advanced to the writing of words, the capital letters should be gradually introduced, and in the same spirit of teaching as the common letters. Their principal elements, which are few in number, should be drawn first and separately; then the letters themselves drawn according to their simplicity in combining these elements; then the letters written by themselves; and finally combined in words with the small letters. It need hardly be remarked, as bearing on gradation, that each stage of exercise should be well practised before another is taken up; and that the stages already learnt must be practised alternately with each new one.—Error is sometimes made in protracting the time of the writing-lesson, especially with junior classes. It cannot but be prejudicial for them to persevere in writing after the hand is fatigued. Two short lessons are much preferable to one long.

348. Freedom of Imitation.—The ruling of the Mulhaüser copy-books is objectionable on grounds already stated. Nor is it necessary, when the eye has been trained beforehand to judge of the forms and lengths of lines: it is, in fact, only a mechanical device designed to make up for the want of such training, though it by no means does so. The common-ruling is sufficient, viz., the line on which the writing is to be placed; for text and half-text, two parallel lines to indicate the size of the characters. In the text-ruling, a light intermediate line bisecting the distance between the parallels is sometimes given: this is the utmost that should be allowed, and it should not be allowed permanently. But it requires long-continued practice before the pupil can dispense with the upper parallel, and still longer with the lower.—How should the models be set before the pupil for this free imitation? On the black-board chiefly during his early lessons; as they are thus most easily susceptible of full explana-

tion to the class. But on this point we may borrow an idea from the Mulhaüser method, and recommend the teacher to use large-printed models of the letters with linear sections (such as Richson's) to aid his demonstrations. The pupil should nevertheless see how it is actually made on the board. When the class advances to words, the black-board will still be found useful for setting occasional models : but as the teacher cannot find time to set these for all lessons, or may lack the necessary skill, printed models are used. These may be put as the headings of the pages of his copy-book, or, as some prefer, on separate slips.

349. Fidelity of Imitation.—Fidelity of imitation is essential on the part of the writer ; and how to secure it is one of the great problems in teaching writing. It is a frequent complaint that the pupils do not imitate the models before them ; or, if they do so at all, that it is only for the first few lines of their performance, and that, as they descend the page, they gradually lose sight of the model, and imitate either their impression of it or their own writing. That they should during one-half of the lesson imitate what is correct, and during the latter what may be assumed to be imperfect, must be no small obstacle to steady progress. The remedy for this is not to be sought for in any mechanical expedient, but in the teacher's habit of superintending the lesson. If he watch its progress, and make all his corrections with reference to the model, he will doubtless form in them the habit of close imitation. But it would much facilitate the application of the remedy, if the copy-books used contained not more than half as many lines as they do, and these somewhat longer : the writer's eye would then never be directed so much away from his model.[1]

350. Judicious Instruction.—The teacher should, as above stated, give explanation of each new lesson to the class, referring to the model either on the board or on the copy-line. And, in the manner of a short oral lesson, he should put questions to secure that they comprehend it. If the lesson is to be repeated, as will generally be the case, he may repeat his questioning away from the model. Then, when the class is writing, he should be vigilant in superintending their performance ; pointing out faults, or, what is better, requiring the writer to point them out by

[1] *Min. Counc.* 1853, vol. ii. p. 923.

comparison with the model on being told the letters in which they occur, and frequently correcting them by guiding his hand to the true formation. This should not be done when a whole page is written and the lesson finished, because it cannot then be done to any purpose; it should, if possible, be done line by line in course of the exercise, when there is still opportunity to impress the amendment. This will moreover accustom the pupil to scrutinize each line he writes, and so to try to make each better than the one preceding. Finally, the teacher should note any errors prevalent over the class, and correct them publicly on the board, either at the conclusion of the lesson or at the beginning of the next. In this way that collective demonstration and individual correction are secured, which are necessary to all class-teaching.[1]

351. Application of Writing.—It may justly be urged that the writing-exercises should not be so exclusively formal as they generally are; but that the pupil be accustomed to apply his writing occasionally to some useful purpose. The interest that would attach to practice of this sort would be felt as an additional incentive to carefulness and diligence. For this purpose, transcription and dictation should be employed with the more advanced pupils, not merely for the sake of spelling, but as exercises in writing, and the pupil required to be as careful in the work as in his ordinary writing-lesson. If want of time be pleaded as an objection, the answer is that a portion of the time set apart for the ordinary practice of writing can be devoted to this purpose. The adoption of such a plan would necessitate a quicker approach to small-hand than is now made. This has been mentioned as the good feature in the method described, § 344. Another advantage of these exercises of application would be that writing could then be included in the list of subjects for home-study. Of course it is assumed that the character of these exercises will be accommodated to the degree of skill which the pupil has acquired both in writing and in language.[2]

352. Exercises on Parts of Letters.—When a class has attained fair skill in writing, and can afford to attend to minutiæ of style, special exercises may be set on the parts of letters. To

[1] *American Journal of Education* (Barnard's), No. xi.
[2] *Min. Counc.*, 1845, pp. 232, 269; Willms' *Education of the People*, chap. v. sect. 5.

such a class these exercises are both intelligible and interesting, for they have a knowledge of the whole letter to which a part belongs; without which the latter could not be executed with intelligence or with certainty of correctness.

353. Current-hand.—The teacher should bear in mind that the school-hand, with all its formalities, must ere long be exchanged for, or, to speak more correctly, be applied to, the business-hand. For which purpose greater rapidity of execution must be attained, yet without impairing legibility. It would be ill-judged to allow the pupil to make this change too soon: for a good school-hand is the foundation of a good current-hand, and, the better the one, the better will be the other. A premature change will probably break down the pupil's hand altogether. Practice alone can introduce him to expertness in current-hand; but when he is prepared to attempt it, the teacher may do something to facilitate his success:—(1.) By accustoming him to write whole words, and groups of the smaller words, without lifting the pen, and with a very gradual increase of speed: (2.) By accustoming him to write upon unruled paper, to test his power of writing straight. But the pupil should not be allowed to try both of these novelties at once, each being enough to engage his attention at one time. Transcription of passages and letter-writing (§ 334) will form the best materials for practice at this stage.

354. Connexion of Writing with Drawing.—The propriety of basing writing upon drawing has already been insisted on; but the intimate connexion of the two subjects must now be brought into greater prominence. Writing is a species of drawing; any instruction in drawing, therefore, which the pupil receives may be expected to bear fruit in the improvement of his writing. When the eye is educated to observe, and the hand to execute, correct and graceful forms of objects in general, the taste for form is refined; and it cannot but happen that the culture thus given will show itself in any special branch of instruction in form. Experience amply confirms the reasonableness of this expectation. It is therefore worthy of consideration whether drawing should not be more widely considered a part of the course of common-school education, if not for the undoubted advantages which it directly contemplates, at least for the indirect benefit

certain to accrue to the practice of writing. The object, it may be proper to add, would be gained without at all approaching the great expenditure of time required for the attainment of a delicate skill in the art.[1]

CHAPTER VII.

DRAWING.

355. Object of Teaching Drawing in Schools.—In speaking of drawing as part of the work of the common-school, we do not seek to place it on the same level of importance with writing or the other branches of elementary instruction: for it cannot be said to be necessary to the pupil in the sense in which these are. Nevertheless, it is highly expedient to give some knowledge of it, for the sake both of its direct and its indirect benefits. In the first place, it trains the eye to greater accuracy in its conceptions of form; or rather it is required to make these conceptions accurate at all, since without such training they are altogether inadequate and even distorted. As the cultivation of the sense of form, therefore, drawing contributes largely to the mind's power and furniture. Secondly, drawing implies a training of the hand to the construction of forms in addition to the training of the eye in their appreciation. This skill of hand is necessary to verify the skill of eye; but it is also necessary on its own account as the means of setting forth expressively to others the ideas which we ourselves have formed, but which oral description fails to convey. This conjoint power of eye and hand is not to be regarded merely as an agreeable accomplishment of the educated man: it is productive of equal pleasure to the classes who attend the common school, and who are to be dependent on their own labour for their maintenance: whilst it will probably influence in no small degree their advancement in their future occupations.

There is an indirect benefit of drawing too important to be overlooked: the practice of it tends to give a higher degree of skill in the art of writing. Each is a study of form, the one of form in general, the other of a particular set of forms: it is

[1] Mann's *Educational Tour; Min. Counc.* 1848-9, p. 618.

reasonable to expect, therefore, and experience warrants us in expecting, that the study of the one will act beneficially on that of the other, by imparting a nicer appreciation of the forms to be constructed, and a higher degree of constructive skill.

Drawing is not to be taught in the common-school as an 'accomplishment' in the sense in which it is so regarded in middle and higher-class education, and much less as 'art' in the sense in which it is so regarded by the professional student. Artistic delicacy of perception and skill in touch are quite beyond its province. Its time does not suffice, nor does the teacher's own education provide, for these: nor can they be regarded as a legitimate object of study for its pupils. What drawing, as there taught, should aim at is the intelligent appreciation, and the correct mechanical reproduction, of the forms of common objects; and not the æsthetic and emotional element in representation, which is the peculiar characteristic of the fine arts. "By the term *drawing*," says Dean Dawes, "we must, in the outset, clearly understand that the end of the study, as introduced into elementary schools, is not necessarily 'fine art' in the production of pictorial manifestations. Drawing, strictly speaking, should be looked upon as a mechanical exercise, analogous, in fact, to writing, and regarded, if I may so express it, as *graphic language*—that as ideas are expressed by words [*i.e.*, orally] or by writing, so they may be embodied by drawing." Considered in this light, it is a useful and practicable study in the common-school: the teacher needs no artistic education for it: the general training which, in this as in other branches, is quite within his reach, is sufficient to enable him to guide his pupil's efforts: the materials requisite are not beyond the means of the school: and the two hours or even two half-hours, weekly, which, along with practice of lessons at home, are all that are needed to carry on the study, can easily be spared (at least in the general case) without detriment to its more important work.

But restricted as is the object of drawing in the elementary school, and necessary as it is to keep this restricted object steadily in view, it is quite sufficient, if attained, to awaken the pupil's taste for the art, and thus to lay the foundation for his further prosecution of it in after years, according to his inclination or opportunities.

356. Order of Exercises.—The child very early discovers a taste for drawing: which accordingly the teacher should appeal to and confirm by exercise. The slate-drawing of the infant-school may be regarded as the first stage of progress: in which the pupil is required to copy straight lines in their various positions and of various lengths, groups of parallel lines, lines of the same length, lines bisected and trisected, angles of various kinds, the simple geometrical figures straight and curved, and then to apply these elements to the construction of common forms like the letters of the different alphabets, and of the outlines of common things; such as a window-frame, a comb, arrow, star, cross, rude houses, and other objects of straight outline, and a cup, target, hoop, spire, cart-wheel, pillar, dial of a clock, leaves, and other objects of curved outline. The effect of this preliminary training on his conception of form and his power of construction is distinctly appreciable.[1]

These exercises are, however, rather a preparation for drawing than drawing itself. The first thoughts of the teacher must be to maintain the interest which attaches to them for the succeeding stages of the subject. Perhaps the step which is next to be taken is the most critical of the whole. The child is strongly imaginative; and if left to draw by himself, will be found sketching the common animals about him of which he is so fond. It would be useless at this time to set him such exercises as lessons: for he has not that command over the elements of form which could hold out the hope of his attaining even moderate success. So that no discipline would be acquired as the result of them, and the time would be virtually lost. It is one thing to preserve his interest in a subject, and quite another to allow his own fancies to dictate the particular kind of lessons which should be set to him. Childhood is the time in which the technical difficulties of study should be got over; and accordingly we must now set him to work carefully on those elementary forms which he will afterwards have to combine in the sketching of actual objects. It is by no means hopeless in drawing, any more than in other subjects of study, to attain both ends; to maintain his interest, whilst yet he is subjected to the drill which is indispensable to his further progress.

[1] *Early and Infant School-Education*, Part ii., Chap. 3, Sect. 8.

To cultivate his conception and to increase his skill of hand, he must continue to work exercises of a similar kind with those he has already practised, but with a somewhat higher aim, and with a higher kind of effort. He must still draw lines of varied position and grouping, and geometrical figures both straight and curved. Particularly he must keep in view, in his practice of them, to accustom himself to *measurement* by the eye and hand, unassisted except in so far as required to test the results of his drawing. Hence he must construct lines of certain sizes and lay off definite parts of these; triangles equilateral and isosceles on bases of estimated lengths, and of definite proportions; circles bisected and otherwise various, subdivided by diameters and chords, and constructed on diameters having a certain proportion to each other. When he has attained a fair degree of facility in drawing these upon his slate, he should repeat them on paper with the pencil: the changed conditions of pencil-drawing are such as to make the exercise virtually new to him: and he may require as much longer practice to obtain facility on paper as he has already required to obtain it on the slate. He must be very carefully watched in his first use of the pencil: shown how to use it for marking, how to lay off the figure on the paper, and how to avail himself of all legitimate helps to construction: so that no bad mechanical habit may afterwards interfere with his efforts.

These exercises may seem to be uninteresting from their purely mechanical nature; but they are by no means necessarily so: they will just be in that respect what the teacher makes them. If they be exacted in a mechanical way, in obedience to rule alone, they will be so; but the teacher who interests himself to find variety in them, to give intelligent directions for them, and above all to associate them in a pleasant way with familiar objects, will invest them in the minds of the pupils *with an intelligible purpose*, which is all that is required to make this, or any other exercise, interesting. He may still further awaken the pupil's interest by prescribing simple exercises of invention; giving general hints as to the kind of design which he wants, but leaving the details entirely to themselves; for instance, designs to be executed by straight lines, or by curved lines within the circle, by curved lines within the square, and so on. Such

exercises, with the criticism and comparison which they cannot fail to suggest, are as profitable as they are interesting. Further, since all the instruction in drawing up to this point should be given *in classes*, he has all the resources incident to class-teaching for keeping up an interest in their work, and that is not small.

357. **Drawing from the 'Flat.'**—The pupil may now proceed to sketch objects from the flat. These should be spirited and simple in outline; the worst fault they can have at this time is to be crowded with details. They should be very various, moreover; comprising the objects of common life, ornamental objects of flowing outline, and the figures of animals. Collections of such copies are numerous: the most convenient are those which have the outlines on separate sheets, for convenience of the pupil taking them home with him. The short time that can be given to the drawing exercise in school does not suffice for practice; the teacher should occupy it for the most part with explanations to individual pupils—for the instruction must now be individual—and expect the exercises to be performed mainly as home-work. The benefit of them will depend entirely on the teacher's judgment in correction. He must in the first place set up for the pupil a fair but not unreasonable standard of excellence, and require him to work steadily up to that in each exercise, not simply accepting what he offers and allowing him to pass on to another, but requiring him to do it a second time in the event of failure on the whole, and even a third time, or, if the outline be fair on the whole, to alter it in part again and again with a view to its improvement. The value of judicious correction as part of teaching has already been pointed out (§ 267). There is no exercise in which its advantage is more conspicuous than in this. The pupil should not simply be told what is wrong, but led to discover it for himself; he will thus feel an interest in amending it, which will prevent the work of correction from becoming wearisome.

When facility has been acquired in making exact copies from the flat, the pupil should be exercised in making them on a larger or a smaller scale. This is a still higher exercise, involving the same power of hand and a greater exercise of judgment in estimating form. There can be no better test of his progress than

it affords: if he has not been taught intelligently, he will hardly be able to do it at all.

358. **Drawing from the 'Round.'**—In many, perhaps most, common-schools, it may be impossible to study drawing beyond the point now reached. Still much will have been done to cultivate the sense of form; and enough to give the pupil an impulse to the further prosecution of the study afterwards. There remains, however, the more important field of object-drawing from the model, which is what we understand by drawing when we use the word without qualification, and into which the pupil must now advance, if he advance at all. But this could not be even entered upon without the training of eye and of hand resulting from previous practice.

In the drawing of solid bodies there are two distinct elements which require to be studied, *perspective* and the management of *light and shade*. The outline of a body seen from one point of view is very different from its outline as seen from another; a cube seen in front, for instance, from one seen to the right or left hand—an animal seen in front from one seen in profile. The design of drawing is to represent the body on paper, as it appears to the eye: there is no absolute form in which it is to be drawn, as if it were a geometrical figure, like a triangle or square. We must therefore be able to estimate the effect of position and distance on its outlines; in other words, we must have some knowledge of perspective.

Again, whatever position a body occupies, it has a side turned to the light and a side turned away from it, that is, it has light and shade; we cannot conceive of a solid body wanting this accompaniment. How necessary a part of representation it is may be seen when we reflect that it often alone enables us to judge of the position of the body represented, and even sometimes of its nature: for instance, a sphere never ceases to appear round wherever it is placed from us, so that we must depend on light and shade to indicate its relative position; again, a cube looked at fair in front will not differ in its representation from the square (which is the outline of its side), but from the shade which its mass throws on the one side or the other. The appreciation, and the mechanical execution, of light and shade are thus necessary parts of the art of drawing.

359. Perspective of the Straight Line.—In teaching perspective, it will be found convenient to deal with the perspective of the straight line first, and then with that of the curve.

If the pupil be asked at once to draw any box-shaped body, he will probably draw a square or an oblong, as the case may be: he thinks that that is its outline. This suggests both the deficiency in his conception and the remedy. He has drawn it under one aspect; and he has no idea that in a different position it has a different outline. The teacher must have recourse to oral instruction to make him conscious of the fact.

Selecting the cube as the most convenient representative of solid bodies contained by straight lines, let the teacher exercise his class in observing it, in the first place, as a geometrical solid. Let him show its six sides, and their equality, in respect of line, angle, and area. Then let him show the class that they cannot see all these sides at once, but only one, two, or three, as the case may be; which of them, and how many, depending on the position in which it is held. Let him exercise them in this, by holding the cube in different positions, and asking them to point to the sides of it which are visible to them.

Further, let him show them that, though all its sides are of equal size, yet their apparent size differs much, according as they are seen in front, or at different distances to the right or left. Let him exercise them on observing the solid in different positions, with a view to their discriminating the apparent area of the sides which are seen. And in a similar way let him exercise them in tracing the several boundary lines of the body which they observe when it is held in different positions, their apparent lengths, and the angles at which they incline. With such preliminary instruction, they may commence to draw its outline for themselves.

The cube may accordingly be set before them in various positions, as straight in front on a level with the eye, to the right hand, to the left, with its base parallel to the ground: then in corresponding positions below the level of the eye: then in corresponding positions above the level of the eye: then in corresponding positions with its axis variously inclined. They may receive a few preliminary directions, too few rather than too many, in order to leave something for them to find out; and,

when they have drawn it, as they think they see it, they should be led by further explanation to find out their errors or oversights, and to remedy these for themselves. By the time they have drawn the cube in several positions, they will have come to the knowledge of the chief properties of straight lines in perspective, *e.g.*, that vertical lines seen directly in front remain vertical, but, when seen to the right or left, slope inwards; that horizontal lines in an object are not always horizontal in its picture, but sometimes seem to rise and sometimes to fall; that the parallelism of parallel lines, which run away from the eye, appears as convergence towards a distant point; that lines in certain positions from the eye must appear foreshortened in their representation.

A complete theory of perspective is rather complicated; but these its leading features may be easily verified by one kind of illustration, which they have all noticed and indeed had forced on their notice; and from which they have seen perspective in practice before they know anything of it as a theory. In the view along a street at night when the lamps are lighted, particularly from an elevated point, the converging of the parallel sides, the rising up of the horizontal base at the far end, the crowding and diminished size of the lamps as they recede from the eye, are familiar to every one; and perfectly illustrate the rules which they require to observe in their drawing, but which they have some difficulty in comprehending at first, when dealing with a single body of small volume just under their eye. To whatever extent, it may be added, they draw from perspective, it must be with intelligence; a mechanical and unintelligent practice of this sort of drawing is the most useless and hopeless of all conceivable exercises.

The principles of perspective learnt by the study of the cube should then be applied to the drawing of such objects as books, bricks, boxes, tables, and chairs, singly or in combination; and after a time, to the drawing of the elevations of a room, seen from its interior, or of a street, which is very instructive practice. It would be well for the school to have copies of such exercises; that the pupil may have the means of comparing his drawings with them, or of drawing, in the first instance, from them.

360. Perspective of the Curve.—The same kind of oral instruction should be given preparatory to the drawing of curves in

perspective. It will be sufficient under this head to point out what seem to be best drill-exercises for giving an acquaintance with its chief laws.

Perhaps the best exercises to begin with are those which may be derived from the drawing of an ordinary hoop, held in all its positions before the pupil; from that in which it will appear to him as a straight line (when his eye is in its plane), up through its various inclinations till it meet him as a full circle (when his eye is in the line of its axis), and from that round again to its first position. Then it may be placed before him in different positions to the right and the left. From this series he may gather the rules for the perspective of the circle; how it may appear as a straight line, as an ellipse of various proportions, and as a regular circle.

Another very instructive series of lessons may be got from the cylinder; which should be studied in a variety of positions relative to the eye, and with its axis pointing in a variety of directions.

The study of the 'vase' affords the simplest and most interesting application of the principles of curvilinear perspective. Its outline exemplifies various curves; and its base gives opportunity for practising at the same time the perspective of the straight line.

361. Light and Shade.—The theory of light and shade is exceedingly simple, and may be made very intelligible and interesting from the forcible illustrations of it which every one meets with. One's own shadow when standing in the sunlight or in the light of a fire in a darkened room, or the changing shadows of objects on the walls of a room in which a person is moving with a lighted candle, serve to make it perfectly clear.

In applying this theory to drawing, the cube or any of the other bodies already referred to may be taken as the subject of demonstration. In its various positions, let the class be led to notice the side on which the light strikes and the side that is turned away from the light; also the adjacent ground shadow, and how it varies in size, outline, and direction, according to the variation of position in the object. The converse exercise would be instructive; if the teacher has copies of the shaded cube or other solid in his collection of examples, let him practise the class

in judging of its position from the eye when it was drawn, and the direction in which the light struck upon it.

The drawing of light and shade on paper is much more difficult than the understanding of it; so that the pupil cannot be expected to execute any but the very simplest cases of shade, and even these he may be able only to indicate rather than to execute. But his understanding of the subject is by itself of much importance; as bearing on his appreciation of drawings and pictures which may fall under his notice.

362. Applied Exercises.—All the elements of drawing have now been explained, and the pupil is prepared to proceed with sketching from the model. For which purpose the school should be provided with a small collection of models and casts.[1] The explanation of principles has been given in classes, but the instruction must now again become individual, and be conducted in all respects analogously to the drawing of outlines from the flat, already described (§ 357). Progress will necessarily be slow, since practice cannot be carried on at home from the absence of the model.

The utility of drawing as 'graphic language' is not fully felt until the pupil has acquired some power of drawing from memory. The forms of which he may wish to speak cannot always be before him to copy from, any more than the originals of the ideas which he may wish to express in words. Impressions or ideas of both must remain in his mind, and he must be able to reproduce both in their appropriate language. In the case of the simplest and commonest objects, therefore, after drawing them from the model, he should be required to draw them from memory. And that he may not in such an exercise be simply drawing from a recollection of his *previous performance*, he should be encouraged after a while, to draw them from memory, or rather from imagination, in different positions. This requires the greatest judgment of any exercise in drawing to which he can be set: and is the nearest approach he can make to original composition.

[1] The Committee of Council supply these to schools, as also copies on the flat.

CHAPTER VIII.

ARITHMETIC.

363. Nature of the Preliminary Instruction.—Before entering on the study of arithmetic as a science, the child should receive a course of preliminary instruction similar in its spirit and intention to that which has already been described as proper in the cases of grammar and writing; with the design of awakening his conception of numerical value and operation. Number is a property of things which he observes very early, and he cannot long avoid some practical familiarity with elementary numerical operations: he is therefore very soon in possession of a sufficient experience to serve as the basis of his first notions on this subject. The features of this preliminary instruction are the following:—(1.) We do not commence by giving him rules, which would presuppose in him the very conceptions which it is our object to awaken. We appeal to his experience of number; we show him numbers differing from each other in certain ways, and thus give him the idea of relative value; we take numbers with whose value he is acquainted, and we increase or diminish them variously, that he may see what is meant by numerical operation. We simply turn his attention on his own experience, and lead him to infer from that what it is that he is working with, and how he works.—(2.) In this instruction concrete numbers alone serve our purpose. "He does not use numbers for their own sake, but for the sake of the things to be numbered: he counts by sight, and is not able to abstract *number* from *things*. He knows what five balls or five horses are, but he cannot reason about the number five." In a word, it is with number, not as a science, but as a property of bodies, like colour or form, that we have to occupy him. We must carry him on to the abstract by-and-bye, but we can do that only through the concrete.—(3.) The whole instruction is oral, and does not admit, as it does not require, slate-operation.—(4.) All the elementary operations of arithmetic, both with whole and fractional numbers, both with abstract numbers and with the standard measures, may be illustrated in course of it; as will be shown more particularly in the following paragraphs.

364. Extent of Preliminary Instruction.—The course of instruction may be thus stated in outline :—*practical numeration*, in which is illustrated the value of numbers, a separate lesson being given on each up to ten, and thereafter on each ten numbers up to a hundred, the symbols of the numbers being also taught, but not theoretically. With numeration the first steps of addition and subtraction are inseparably blended, for it is by constantly adding one that we reckon the numbers upwards, and by subtracting one that we reckon backwards. In working by *addition*, we first add two small numbers together, keeping the receiving number and the added number constant in succession ; the constituent parts of a given number may then be asked for ; then the adding of more than two numbers may be practised ; and then the adding of tens, or of tens and units. In working by *subtraction*, the easiest exercise is to subtract from 10 or any given number the several numbers below it ; then to vary the minuend, keeping the subtrahend the same ; then to find the minuend or the subtrahend, when the other two terms are given ; then to subtract two numbers from any given one ; then to subtract larger numbers from each other, including tens ; then to combine addition with subtraction. *Multiplication* should be illustrated by addition : the first examples should be with small numbers, the multiplier being constant ; then the same, the multiplicand being constant ; then multiplication of tens and by tens ; then the finding of one or both factors of a number ; then multiplication by more than one number : the multiplication-table should be committed to memory. In working *division*, the simplest exercises are those constructed by keeping the divisor constant and proceeding gradually upwards with dividends containing it evenly ; then exercises with remainders may be introduced ; then division of tens and by tens ; then questions combining multiplication and division. When the four fundamental operations have been illustrated separately, they may be practised in combination ; a certain number being selected, and questions involving them all being put in connexion with it. Elementary operations with fractions may be performed as well as with whole numbers, the one being as easy as the other, if proper illustration be used : all the four fundamental rules may be embodied in them.—In all that has been said, number in the abstract has

been spoken of; but it must be understood that each operation is to be illustrated by the use of objects. It is for such illustration that the ball-frame is constructed; and it is sufficient for the teacher's purpose, provided he use it so that the pupil's eye can follow his manipulations, and as a means rather than an end.

365. Standard Measures.—The standard measures are very instructive for the purposes of this preliminary training; being interesting, not less from the concrete nature of the units with which they deal than from their utility and constant use in the transactions of life. It was the fault of former teaching that, so far from illustrating abstract number by concrete examples, it handled the concrete numbers of which these tables of value are composed as if they were abstract; thus making them the most wearisome part of the subject for the pupil to acquire, instead of being what they should be, the easiest and most inviting. To illustrate the mode of teaching them, we shall take one example, the table of size or linear dimension. The pupil has to learn regarding it—(1.) the value of the various units of measurement employed; (2.) the relation of these to each other; and (3.) the application of them to practical purposes. The first he learns by *seeing* the units before him and handling them, so as to have an idea of their size impressed on his mind, and be able to recognise each when it is presented to him; the second he learns by comparing the units amongst themselves by actual measurement, so that he may verify by experiment how many of one kind make up one of another kind; the third he learns by applying the measures in common use to determine the lengths of various objects about the school. In the same spirit of illustration, and by the same threefold process of inspection, comparison, and application, should all the other tables be learnt, as weight, money, capacity, etc. For which purpose it is obvious that the teacher should have all the weights and measures of the country, and duplicates of many of them, amongst his apparatus. When the tables have been gone over as to their individual members in this way, the class will combine these into a whole on the board with very little help from the teacher; nor will the committing of the tables to memory be a work of much difficulty in the circumstances.—Such is the course of instruction which should be given

to the child, before he enters upon the formal study of this subject; to the method of which we now proceed.[1]

366. Object of Teaching Arithmetic.—Arithmetic is one of the three branches which have always found a place in secular school-instruction from their *instrumentary* character: *i.e.*, from their having a distinctive value as instruments in the business of life apart from that which the acquisition of them may have as educative processes. The power of using these intelligently is of higher value than any acquaintance with them which is merely practical: yet, so far should we be from undervaluing the latter, that we must regard it as the *immediate* object of their being taught at all in school. In different ways and degrees, however, the study of these instruments may be made effective means of mental cultivation; and as this does not interfere with, but rather promotes, the attainment of practical skill, the teacher should consider at every step how this higher end may likewise be attained. The substance of what has been said, so far as regards arithmetic, is this: that the teaching of it should be carried on with two ends in view, a special and a general; the one to give the pupil skill in computation, the other to strengthen the powers of his mind. The two, though distinct, must be aimed at simultaneously; the one aiding, and testing the attainment of, the other. If the teacher keep in view the special end alone, he may enable the pupil to make a good appearance under a superficial examination, and fit him in a certain sense for entering on business, but he neglects the opportunity of enlarging his mind, and thereby of fitting him for a more influential position in business: if he allow the general end to engross him too much, by failing to impress facility in using definite modes of procedure amidst the profusion of his exposition, he may injure the pupil's prospects, whilst he will certainly discredit his own method.—Regarding practical skill in computation, it is enough to say that it consists in accuracy, readiness, and neatness, and that these are named in the order of their importance: a more detailed statement is needed to show wherein lies the peculiar value of arithmetic as a mental discipline.

367. Discipline in the Acquisition of Rules.—In every numerical process there are two things to be apprehended: the rule which directs it, and the theory of which that rule is the expres-

[1] *Early and Infant School-Education*, part ii. chap. 3, sect 2

sion. Both are necessary, and each should be taught with reference to the other; the theory with a view to the rule, the rule as founded on the theory. And it is as much an exercise of intelligence to carry out the theory to the rule, as it is to trace the rule back to the theory. In expounding any process the teacher should first of all lay before his pupils some familiar examples, from which they may be led to see the object of the process, and by analysis of which they may infer the elementary numerical operations which must be combined to attain that object. When they can account for all the steps of the combination, they know the theory of the process. The principle of teaching here assumed is identical with that already insisted on in the case of the other two instrumentary branches of reading and writing (§ 343.) It enters into the very idea of teaching arithmetic intelligently that the pupils study the theory of the processes; but here, as elsewhere, the theory must be derived from the practice, the general from the particular, the unknown from the known. And this is what is done when the teacher first submits examples to his pupils within their experience, and, leading them to see what operations are required in these special cases, carries them along with him in evolving therefrom the procedure in the general case. When the theory has been reached and impressed by a sufficiently wide induction of examples, it remains for him to show them how its conclusions may be embodied in a short handy formula for practical working, *i.e.*, to extract a convenient *rule* from it. In passing on to which he must be careful to compare the full form of working necessary to reach the theory of the process with the shortened form of working directed by the rule: that they may see that the latter is not anything new or arbitrary, but either only a different setting down of the process for convenienee' sake, or a shortened form in which certain ellipses of operation must be carried along in the mind of the operator. The following extract sets the pedagogic relation between theory and rule in a clear light, and answers a question which may be put in the case of those operations whose theory is too recondite to admit of exposition at the time they present themselves in course of teaching :—

"We entertain no doubt of the thorough soundness and great importance of the principle, that it is desirable, as far as possible, to conduct a child gra-

dually, by his own observations and induction, to the rules which he is hereafter to apply. All knowledge acquired by reasoning and observation is more valuable, and is better known, than that which is received on the authority of others. It is better known because, in the process of its acquisition, it has been seen in various bearings and connexions, and because the principles on which it depends have been fairly worked into the mind, and remain there, capable of the same and further applications, even if the results originally deduced from them are confused or forgotten. It is, for the same reason, more valuable; and yet more so, because the process of acquisition has exercised the most important faculties of the mind, instead of being confined to the exercise of others of inferior dignity—namely, memory, and a certain degree of attention and distinctness in comprehending the application of a set form of words, and performing the operations which they direct. Whenever, therefore, a child can be led to form, to think out, as it were, a rule for himself, it is most desirable that he should; but it does not therefore follow that, in cases where he is unable to do so, the rule should be suppressed or omitted; nor does the mere fact that he may be taught, without the rule, to perform the same operations prove that the rule is superfluous or ought not to be communicated, when the operations without it are much more laborious and circuitous than when it is applied. Where, indeed, the principle of the rule is unintelligible even when communicated, it may *generally* be desirable to suppress it: there may be more harm in accustoming the mind to take things upon trust [in a demonstrative science like this], than in learning it without the practical assistance to be derived from the rule itself. But the more common case will be that of a rule not within the compass of the learner to discover, but admitting of full explanation and proof, such as he can comprehend, when it is once announced to him. And these rules it appears to us desirable to communicate: not in the first instance, indeed, before the want of them has been found, and their value consequently appreciated, by examples of the same operation performed without them; but as soon as these preliminary steps have been gone through, and without waiting till the same cautious process has been carried into other departments of the subject."[1]

The processes commonly taught in arithmetic are numerous: of which there are four, addition, subtraction, multiplication, and division, which are primary or elementary; the others are derived and composite. The four named rise in gradual sequence and in mutual dependence out of that fundamental relation of numbers which our system of notation assumes as the basis of all arithmetical calculations; the first two directly, the last two indirectly through these first. All the other processes are particular com-

[1] *Quart. Journ. Educ.*, No. III.

binations of these elementary operations; of which the form as a whole is determined by a consideration of the object of the process, and each step is suggested by some first principle of reasoning, *e.g.*, that only quantities of the same kind can be added, subtracted, or compared (addition, subtraction, proportion), that we can operate on or with a number by operating on or with its parts in succession (addition, subtraction, multiplication, division, practice, etc.), or that, if one quantity exceeds another so many times, the price of the one will just as many times exceed that of the other, the quality being the same (rule of three). The construction of each rule is the combination of the primary operations with reference to such principles; that is to say, it is a process of reasoning from first principles, of greater or less continuity, according to the circumstances of the case. These considerations suggest these two remarks :—

(1.) "If the rules and principles of arithmetic are philosophically deduced and explained, the acquisition of any one makes all the others of easier attainment. It is not that the one rule involves or explains another, but it involves a general knowledge of the nature of number itself, a general facility and distinctness in dealing with it; and the principle of numeration more than anything else requires and produces this familiarity. While, therefore, we fully allow the expediency of beginning every new stage of the science from the commencement, from the easiest and simplest examples, instead of passing immediately from rule to rule, we should expect that in each successive stage the number of these mere examples might be diminished; that the general familiarity with number and its relations acquired in the learning of one rule would, in some degree at least, facilitate the acquisition of the next, and that the simplifications finally adopted in one case would suggest corresponding contrivances at an earlier period of another."

(2.) From the number of these rules, this branch of instruction presents an extensive field for exact reasoning. In exercising the reasoning faculties and forming the understanding, its functions are the same with those assigned to geometry in a higher stage of education: it is the Euclid of elementary schools. "An ordinary branch of routine instruction is converted into a demonstrative science not beyond the reasoning powers of children, and to be used as an expedient in training them."[1]

368. Discipline in the Application of Rules.—Valuable as is the mental training involved in the intelligent acquisition of the rules of arithmetic, it is by no means to be regarded as exhausting the educative power of this subject: nor is the tact of

[1] *Min. Counc.*, 1844 and 1845; Mr. Moseley's Reports.

the teacher in demonstrating these rules to be relied on exclusively as the test of his pedagogic skill. So far from this being a just view, the study of arithmetic may still be the means of valuable training to the pupil who learns its rules mechanically; and, on the other hand, a teacher may exhibit his proofs and demonstrations with faultless accuracy and order, and yet have a very inadequate notion of the capabilities of his subject as an instrument of elementary education. The discipline to be derived from the study of any branch lies not less in the *application* of its rules or formulæ of operation than in their *acquisition;* we may safely say, more. This might be illustrated by reference to any science; but that of grammar will best serve our present purpose. The rules and formulæ of grammar which correspond to those in arithmetic are the parts of speech, elements of the sentence, and rules of syntax. These are acquired by the pupil in the same way, viz., by induction upon particular examples; and the acquisition of them involves much exercise of reasoning. Yet it is in the application of these formulæ to the actual analysis of passages that the discipline of grammar is to be sought. So in arithmetic: it is the investigation of problems and the solution of them by application of the rules which make this subject so incessant an exercise of thought for the pupil. In the problem, "Of two candidates at an election, one had 210 votes, but was in a minority of 79; how many people voted?" the numerical process is simply $210 + (210 + 79) = 499$: in the problem, "A train of 540 passengers had 60 in the first class, and 200 in the second; how many third-class tickets were issued?" the numerical process is simply $540 - (60 + 200) = 280$; and, once more, in this problem, "How much will a man of 20 years of age, whose wages are two guineas a week, and whose expenses are £20 a quarter, save by the time he is 30?" the numerical process is

$$\{(2^{£}\,2^{s.}) \times 13 - 20^{£}\} \times 4 \times (30 - 20) = 292^{£}.$$

But in each case the solution of the problem requires a very different exercise of mind from the numerical process alone. In the one, the pupil is told the relations existing between the numbers with which he is to operate; in the other, he has to discover the relations by reflecting on the conditions of the case. In the one, he has just to perform a technical process for which he has a rule; in the

other, he has to find the rule for himself. The one tests his knowledge of something he has learnt; the other his power of using what he has learnt. The working of 'set' numerical processes is, it is true, not of a purely mechanical nature; for he cannot avoid comparing the different processes with each other, he meets with processes of greater or less intricacy under the several rules, he may have to consider the propriety of taking the steps in different orders, and to devise expedients for shortening the way to the results. The thought required for all this, however, is quite technical, *i.e.*, not available for any other processes than those of number: and, whilst his capacity of technical process is quickened by such exercise, it cannot but have an enfeebling effect on his judgment to confine his reasoning exclusively to the finding of results from data which are categorically given and arranged. If we wish to cultivate his general intelligence, we must accustom him to efforts of reasoning, in which he has to arrange the data for himself, as well as operate for results upon them when arranged: for the exercise of general intelligence consists less in the following of rules under circumstances in which their application does not admit of doubt, than in determining the circumstances in which the rules apply, and any limits which these circumstances impose upon their application. It is the exercise of this intelligence which the solution of problems involves; and it is the peculiarity of this instrument of education, that the penetration and clearness of the pupil's judgment in each particular problem, as shown in his interpretation of its conditions, must be couched in the exact language of numerical symbols. The pupil may be practised in working set processes to an indefinite extent; and after all find himself foiled by the simplest problem. A practice which leaves him in this helpless state cannot be said to fit him in any high sense for the business of life; since in life it is, for the most part, the problem that will meet him, and not the rule.

The teacher must therefore systematically and largely engage his pupils with applied questions or problems. These may be introduced under all the processes, beginning with the very first: and there is no limit to their variety. But the greatest caution must be used in graduating them in respect of their difficulty; for, though the child may quickly apprehend a principle, he

naturally proceeds slowly and hesitatingly in its application. The manner in which syntactical exercises are employed in teaching grammar, suggests the manner in which applied exercises should be employed in arithmetic. The former are first introduced in groups to test the pupil's knowledge of the several rules, and then they are set before him miscellaneously that he may find for himself both the rules and their application. So here, applied exercises should be introduced under each rule, requiring the pupil only to find the manner in which that rule is applied; afterwards they should be presented miscellaneously so as to embody various rules, giving him no clue whatever to the rule of operation in each case beyond what he derives from his interpretation of the problem itself. Whether these are presented under a known rule or miscellaneously, they should of course be strictly graduated as to the difficulty of their construction: this important point is probably, on the whole, too little considered, the exercises being erroneously thought to be in their very nature too general to admit of strict gradation. In taking his class through any set of applied exercises, the teacher should moreover remember that each problem is not so much a single exercise as a kind of exercise; and that it will often be of the greatest advantage, when the pupil has solved it as a single exercise, to put it before him in other forms of language and involving different numbers. For the very essence of the discipline lies in training him to recognise his principles under all the possible forms in which they can present themselves. Again, should a problem admit of more solutions than one, the teacher should in the first instance (at least as a general rule) leave the pupil free to choose one for himself: but when one solution has been found, he should encourage him to the other. This course may appear to involve loss of time to the teacher who thinks that all the pupil has to do with these exercises is to get results; but its propriety will be evident to him who looks upon the obtaining of the mere numerical results as only a means to a result of far higher moment, the cultivation of his pupil's powers of mind.[1]

369. Numeration and Notation.—When a class begins the study of formal arithmetic, its first effort is to learn numeration and notation, *i.e.*, the system of reckoning which we employ in our calculations, and the manner in

[1] *Min. Counc.*, 1855-6, p. 646; 1857, p. 651; 1859, pp. 87, 88.

which we express numbers according to that system. These two topics cannot be confounded in the mind of the teacher without making his whole teaching of this subject confused both in its aim and its method. At the same time, they are closely connected with each other: so that they must be taught in mutual dependence.

Numeration falls to be first explained: and it is with the number 10 that the necessity for explanation first occurs. Regarding the first nine numbers it need only be observed, that they should not be designated in the loose way in which they commonly are, as one, two, three, and so on, but systematically as one-unit, two-units, three-units, and so on. For the names one, two, three, etc., apply to the *various groups* of numbers that are afterwards to be formed, as tens, hundreds, etc. And the apparent exclusive appropriation of these names to the units, which is implied in the elliptical way of designating them, is a great hindrance to the pupil's perception of the principle both of numeration and of notation. When the class comes to the number 10, the teacher calls their attention to the fact, that it is considered as thrown into a parcel or group: the advantage of grouping can easily be illustrated from their own experience. The number is in fact not ten, but *a* ten, or *one* ten; and it would be advisable to call it so. In proceeding beyond this number, the reckoning begins with the units again in their order, receiving them as added to the *one*-ten already grouped: so that the numbers in succession are *one*-ten and one, which the class is taught to call, for convenience' sake, *eleven*, *one*-ten and two, *one*-ten and three, etc., called respectively twelve, thirteen, etc.; until the reckoning comes in due course to the *two*-tens called twenty; after which the same process of gradual addition by units is resumed. Each step in the reckoning should be exhibited to the eye on the black-board. The grouping of ten-tens (when that is reached) into a new group called one-hundred, upon the same principle as that embodied in the grouping of ten units into one-ten may form a limit to numeration for a time. So far, the teaching is entirely oral. If it be asked whether at this period the teacher should seek to make the pupils comprehend why the grouping proceeds by tens, the answer is that this is a matter which cannot be made intelligible to them: he may satisfy any desire they are likely themselves to form on the subject by connecting the *ten* with the ten fingers; but any investigation of different scales must stand over till a later period.

370. Notation—Order of Steps.—The notation of the numbers must next be explained: and here again it is with the number ten that the need of explanation is felt to arise. When the teacher comes to the number *one*-ten, he directs the attention of his class to the fact that it is *one* in some sort equally with the *one unit* already learnt; though a different kind of *one*, still of its kind it is *one*. Its notation must therefore be something which shall convey both its agreement with the one unit and its difference. The teacher may suppose different kinds of notation for it, all necessarily modifications of the symbol 1, as *e.g.*, 1', or a larger 1, thus leading them

to feel that the form of symbol which is adopted is not a matter of absolute necessity, but of convenience. So he tells them what that symbol is, viz., 10; leading them to observe that though the cypher is a new figure, it has no value in itself, and is therefore never used by itself, but that it is of great value as that by which we distinguish between the 1 that denotes a unit and the 1 that denotes a ten. When they are thus prepared, he enunciates the principle of the notation to them, that is, by the *relative position* of the figure that its difference of value is denoted. In going on to confirm that principle by other examples, he had better take the tens, or some of them, here: two-tens denoted by 20, three-tens by 30, and so on. These cases are purely analogous to that already taught: so much so, that, under judicious leading, the pupils could infer what the notation for them will be. Then the teacher comes back to the combination of tens and units. If it has been impressed that one-ten is denoted by the symbol 1 in the second place from the right, and the one-unit by the symbol 1 with nothing else to its right, the pupil will have little difficulty in apprehending how *one*-ten and *one*-unit together, or eleven, should be denoted by two symbols standing to each other in the relation indicated by the symbol 11: similarly one-ten and two-units or twelve should be handled, and other numbers in succession. The especial point for careful illustration at this point is to show that a simple juxtaposition of the symbol for ten with the symbol for one, viz., 101 would not denote eleven. For it is just at this point that the popular misconceptions of notation amongst children come in; and if they come in here, they are carried through the whole sequence of notation, and embarrass his entire future progress. The teacher cannot be too careful, therefore, to show them the cypher is only used to keep the figures in their proper relative position, and that, if the figures are in their proper position without its use, as in 11, 12, etc., there is neither need nor room for its introduction. If the symbols up to 20 are illustrated with sufficient clearness, the subsequent ones will cause no trouble.—That the pupil may have familiarity in using the symbols of the different numbers, he must not only have them explained to him, but be in the habit of observing and of making them. Exercises may be formed for this purpose, more or less varied, according to the teacher's ingenuity. Thus the class may write the symbols both successively and miscellaneously to dictation; or they may name the numbers of which the teacher points to the symbols on the board. They may be exercised upon finding particular pages in a book; which is the first application they have to make of their knowledge of notation apart from numerical operation. They may be asked to write down the symbols of numbers which the teacher exhibits on the ball-frame without naming; or to name these numbers orally; or to lay off on the frame the numbers of which the teacher gives either the name or the symbol: for they must learn to associate, not merely the name of the number with its symbol, but both with its value. And practice in reading the notation should be conjoined, at the teacher's discretion, with

operations under the elementary rules; *e.g.*, if the subject of a lesson is the numbers from 30 to 40, each of these numbers may be reached by a series of combined operations with smaller numbers, then written on the board with its name and symbol distinctly enunciated, and the whole column revised when completed.

The number 100 is the next critical point in the pupil's progress: and it should be treated with the same amplitude of illustration as the 10. First let the teacher impress the fact that it is a new group, one-hundred, made up of ten of the lower groups; then that its notation agrees with that of the two kinds of *one* already got in involving the same symbol 1, but that it differs from these in the *position* assigned to that symbol by the employment of two cyphers. Then let him compare the symbol for the one-hundred with the symbol for the number which comprises one of each of the three groups learnt, one-hundred, one-ten, one-unit, 111, or any two of them, one-hundred and one-ten, 110, or one-hundred and one-unit, 101; till the pupil can thoroughly distinguish them. And then let him proceed carefully upward, making those comparisons, and applying those tests, which cannot but suggest themselves to one who reflects on what he is teaching. The numbers are larger and their symbols more complicated; but the pupil has the advantage of the previous training upon the tens to help him. At the same time, he need not now be occupied with this exclusively; but may go on with addition and subtraction whilst his knowledge of the notation is being extended. It is futile to attempt to exhaust this or any other rule at the time the pupil is first introduced to it. For the mere magnitude of the larger numbers, such as those involving tens and hundreds of thousands, is an obstacle to him, even when he perceives the principle of notation: his mind must be allowed time to grow into some familiarity with these numbers before he is expected to manipulate freely with them; and this growth cannot be forced.

In the explanation of notation, it is very important that the *terms* should be used with precision and consistency; the pupil cannot form clear ideas, if he hears 'digit,' 'figure,' 'number,' 'place,' etc., employed arbitrarily and interchangeably.

The following considerations sufficiently show the importance of dwelling with much patience and carefulness on this part of arithmetic:—(1.) "When a principle of numeration, or of considering a number as divided into the successive powers of the number adopted as the scale of notation, is once established, every operation becomes a precedent for another: the mode of operating on tens and units is a proof of that for operating on hundreds and tens, for the quantities involved are similarly related: they are, therefore, only instances, in fact, of the same operation, the addition of 220 and 130 or of 22 tens and 13 tens being obviously exactly the same thing as that of 22 apples and 13 apples, the tens in the one case, and the apples in the other, being merely the subjects on which the operation is performed. There may be different ways of expressing this; and, of course, it would require much

both of simplification and expansion before it was introduced to children; but, directly or indirectly, something of the kind is absolutely necessary, or else all the processes of arithmetic are reduced to mere *counting*, and the learner is not able to form any conclusion respecting numbers exceeding those which he has actually reckoned up to." (2.) In operating on large numbers, whether by addition, multiplication, or the like, we can attain results only by operating on, or by, their parts consecutively. It is in virtue of the principle of numeration that we arrange the several partial results; and that we thus obtain the total result by carrying over units to tens, tens to hundreds, or *vice-versa*.—From both of these considerations it is manifest that all numerical operations whatsoever have their basis in the system of numeration which is assumed, and cannot be understood, even in the slightest degree, without a clear perception of the principle of that system. Wherever, therefore, arithmetic is taught with any pretensions to be a means of education, it must lay the foundation for these operations broad and deep in a full intelligence of that principle. And we have dwelt upon it thus emphatically with the view of removing the erroneous impression, that the discipline of arithmetic does not really commence till the pupil reaches the more advanced rules, and of showing that the character of all the subsequent teaching will depend upon the manner in which he is led to take his first steps in the subject.[1]

371. Addition.—A rational method of teaching this process will direct attention to the following points in order:—(1.) The object of the process will be first explained by giving out a concrete example; *e.g.*, "Having a number of pebbles, I placed 25 in one heap, 16 in another, and 37 in a third; how many had I in all?" in connexion with which it will be shown that only things of the same kind can be added. (2.) The impossibility of adding the three numbers by one step, as we could do had they been smaller, *e.g.*, 3, 5, and 7; and the reason of this fact. (3.) The necessity of therefore adding by successive steps, and then combining the partial results. (4.) How they are divided for this purpose; the units (5, 6, and 7) being added first in a column by themselves into one sum 18, then the tens (2, 1, and 3) in a column by themselves into one sum 6 tens. The units are taken together, and the tens together, as being each of the same kind. (5.) The combination of the two partial results into one final result, by carrying over the one-ten from the sum of the units to the sum of the tens, as provided for by the principle of numeration. (6.) The rule will then be enunciated, each of its phrases being illustrated by reference to the steps in the operation just performed, and in one or two more similar to it, if thought expedient. (7.) In subsequent practice, when examples are wrought on the board, the teacher must not only have the operation correctly performed, but each step accounted for by reference to the rule which has been learnt.—When the rule has been made familiar, the only remaining point to attend to is to graduate the practice according

[1] *Quart. Journ. Educ.*, No. III.

to the complexity of operation involved: thus the kinds of examples should follow each other in the order of the following *types*, 9+4+5 = 18, which is just the expression on the slate in symbol of what he has previously done orally; 23+36 = 59, where there is no carrying involved, but only the axiom of operation by parts; 36+45 = 81, where the carrying implies another appeal to the principle of numeration in addition to that axiom; 36+45+53 = 134; 132+246 = 378; 132+246+31 = 409; and then questions with cyphers.

372. **Subtraction.**—The same remarks as to explanation and gradation apply, *mutatis mutandis*, to subtraction. Only under (4.) it has to be observed in what way the several steps in the operation require to be prepared by 'carrying' one of a higher denomination into a lower in certain circumstances, or 'changing,' as it is more suitably termed after the analogy of the process of changing pieces of money from higher to lower; and under (5.) that the combining of the partial results to get the final is by simple juxtaposition.

The method of working subtraction has been assumed which works by alteration of the form of minuend alone, because it depends on one and the same principle on which addition does, viz., the principle of numeration, and the two can be explained co-relatively. The *method of equal additions* introduces the axiom, 'that the difference of two numbers is not altered if both be equally increased,' and this must have its own illustration before it is employed in working. Thus, if one heap of balls contain 20 more than another, the difference is the same though ten more be thrown into each; if one boy has sixpence more than another, he is just as much richer though both should get an additional penny: 11—6 = 11+3—(6+3). In applying this axiom to working of sums, the teacher must be careful to explain that the ten or the hundred introduced is by pure *addition*, that it is added to both lines, and that it is added to each line in a different form. The processes are exhibited numerically in one example as follows:—

543	53(13)	4(13)(13)
265	26 5	2 6 5
	8	2 7 8

where there is a change in form of minuend alone, and—

54(13)	5(14)(13)
27 5	3 7 5
8	2 7 8

where there is a change both in the form and value of both minuend and subtrahend. Both processes are nearly equally commodious in practice; the first has the advantage in simplicity of principle.

Questions involving cyphers are apt to present difficulty to the pupil in the 'changing;' they cannot but do so, if a number of cyphers be introduced abruptly. But they need not do so; they will not, if such questions be pro-

perly graduated and the pupil made familiar with the management of one cypher before he is expected to work with two, and with two before three. The illustration drawn from 'money' is of great service here: if we have to pay 3d., we naturally 'change' a shilling when we have no coppers; failing a silver coin, a pound into shillings, and a shilling into pence. But the teacher should remember that he should not be anxious to push on the subtraction of very large numbers at first, for the reason mentioned in speaking of notation: the mere magnitude of the numbers will perplex the learner.

The proof of numerical operations should be given as well as the operations themselves, being equally valuable as a mental exercise. It should be given, however, not technically, but with the same appeal to intelligence, when possible: thus in Addition it lies in this consideration, 'that in adding a series of numbers, the sum should be the same in whatever order we add them:' and in Subtraction, 'that what we take away from a thing and what is left of it must together make up the whole thing.' And in practice the pupil should be made frequently to prove his work, as soon as he can be made to understand the difference between the operation and the proof in meaning and design.[1]

373. Applications of Addition and Subtraction.—The utility of oral or 'mental' practice in preparing the way for written operation has already been noticed: and such practice should be continued simultaneously with the written, to give facility in reckoning. It must be performed strictly in accordance with the principle of the rule, however: the mental arithmetic which consists in mere mechanical expedients is of little value. The object of it should be considered as being to give facility of computation according to principle. At the same time it may apply the principle in different ways, if thus it can reach the result sooner. In mental addition, *e.g.*, of 65 and 27, the principle of the operation is most conveniently applied by adding the tens column first, and then combining with the sum the sum of the units column: so in mental subtraction as, *e.g.*, 65—27, the principle is best applied in subtracting the tens column first, and then reducing the process virtually to 45—7 or 38: such expedients are far from being mechanical.

Under both rules the operation should not be confined so exclusively to the adding of units of abstract number as it commonly is; for it is such units that are operated on when we say 'add 137 and 243,' or 'subtract 129 from 380.' *Things* of various kinds should be dealt with, and the answer required to be uniformly enunciated as so many 'things' of the kind mentioned. Moreover, tens, hundreds, etc., should often be the subject of operation; thus 'if 34 tens and 27 tens be added, how many tens in all?' or 'if 16 hundreds be taken from 83 hundreds, how many hundreds remain?' and the answer should be expressed fully both in name and in symbol. By such practice does the pupil acquire a true command over the notation; which he

[1] *Min. Counc.*, 1853, vol. ii. pp. 926-7; 1855, p. 647.

has when he can operate with tens, hundreds, etc., just as he does with units.

It has been made a question whether it would not be expedient to introduce here compound addition and subtraction (so called), in so far as these deal with money. A different scale of 'carrying' is no doubt required; but the child may be held as already familiar with that from experience. Considering the utility and interest which such application of the rules has for him, it does seem expedient to engage him with them. Only they should be graduated in the same way as the questions on pure number; involving first the adding of pence as far as a shilling, then the same giving a sum greater than the shilling and introducing the carrying, then shillings and pence without carrying, then the same with carrying, and lastly pounds without and with carrying of the shillings.

374. Multiplication.—In proceeding to multiplication and division, the first thing to be attended to is to give the pupil a clear conception of the processes he is to work. Many an advanced pupil cannot tell what he is seeking beyond that it is the 'answer,' or the 'product,' or the 'quotient,' as the case may be. From a familiar example it should be made clear to him that in the one we are seeking to find what the addition of the same number so many times to itself will amount to, and in the other how often one number is contained in another. Both are artificial processes, and so are their names; the one, being a short-hand process of addition, should be illustrated by reference to that operation, and the other, being a short-hand process of subtraction, should be illustrated by reference to that operation; otherwise the pupil will never feel at ease in using them, but will always tend to fall back on the natural processes of addition and subtraction in his calculations.

The multiplication-table is the foundation of both multiplication and division. It should first be constructed with the help of perceptive illustration from the ball-frame, so that the pupil may see what is meant by the phrase 'times' or 'number of times' which it employs. Then, by frequent repetition, its results must become a habit to his mind; if he cannot give them with instantaneous accuracy, he does not know the table sufficiently. Mental practice may be used with great advantage to extend this table beyond its ordinary limit in the twelfth line to the twentieth or twenty-fourth.

In graduating the exercises, the multiplier should first consist of the units in succession, the mode of obtaining and combining the partial products being noticed. These will serve as models for the next exercises; in which the multipliers should be the tens in succession. On the manner in which the pupil is practised in multiplying by units and tens separately, and in noting the answers (in the latter case both with and without cypher), will depend his progress in the next set of exercises, in which the multiplier contains both tens and units. In multiplying by such a number as 37, the teacher's difficulty is to illustrate the second line of the process. He should not call

the 3 thirty; that is contrary to the idea of our notation, and only complicates the operation. Let him speak of it as 3, and for a time multiply by it as if it were a separate exercise: and then, recalling the fact that it is tens, consider what the denomination of the product will be. His success in dealing with this matter will depend on how he has taught notation and the previous steps of multiplication: for the pupil will then perceive how far multiplication by 3 tens agree with that by 3 units, and how far it differs. The axiom of partial operations is acted on three times in such questions; but that axiom and the principle of numeration explain the entire theory of the process, just as they do in the two previous operations. In a similar way, multiplication by numbers containing hundreds, tens, and units, should follow multiplication by the hundreds alone, and the comparison of the products with the products in the case of the same number of tens and of units. The method of multiplying by factors, as when 28×16 is performed as if $28 \times 4 \times 4$, though it may be easily illustrated to the eye, need not be noticed at this time; it is of limited practical utility, and introduces an additional axiom.

375. Division.—When the pupil has a conception of the object and nature of the process of Division, he has to learn the division-table, which gives him the elements of all his subsequent operations. This is just the multiplication-table taken in reverse order, and should be learned correlatively to it.

Division is commonly thought to present greater difficulties to the learner than any of the three previous operations, from the fact, probably, that the operation commences with the highest denomination in the dividend, and proceeds to the lowest, instead of, as in the others, proceeding from the lowest to the highest; and particularly the so-called 'Long' Division. It is difficult to perceive why it should be so; for it is wrought by reference to the same two principles as the other elementary rules, viz., the principle of numeration, in virtue of which the 'carriage' is made from one denomination to another, and the principle of partial operations. In respect of carriage, it agrees with subtraction in carrying from higher to lower, while multiplication agrees with addition in carrying from lower to higher. The truth is that the teacher will find the progress of his class easy or embarrassed according to the way in which he has treated the subject of numeration and notation: if he has done that efficiently, the training they have received in working the earlier rules by the principle of partial operations should entirely remove from this operation the formidable character commonly attached to it.

The mode of illustration generally adopted is to exhibit the partial operations in full; thus, $9936 \div 23 = 400 + 30 + 2$, all the appropriate cyphers being supplied in course of operation. This is the correct theory of the process, of course, but for children it is manifestly more perplexing than the common way of working with the contracted notation, owing to the magnitude of the parts with which it asks him to deal. If he has learnt notation well, he will know that he can operate upon 9 in the thousands place or in the hundreds

as if it were in the units; using *relative position* to keep the figures in the result right. The common way of working is therefore sufficiently plain; 23 in 99 is (by trial and error) 4 times, but this 4 will either be units, tens, or hundreds, according as the 99 is, and, as the latter is hundreds, so is the former: then 23 in 73 is (by trial and error) 3 times, but the 3 will be of the same kind as the 73, that is, tens, and so is put next to the 4 hundreds on the right: lastly, 23 in 46 is 2 times, the two being units, because the 46 is, and therefore being put next the 3 tens on the right. If the pupil cannot follow it in this way, the fault is in his previous instruction: and he will much less follow it in the fuller way of writing the operation. Whilst the teacher then may supply the elliptical cyphers in writing down the partial products in multiplication, he will not find it expedient to do so in his pupil's first attempts at division, and should confine himself for a time to using the names of the partial quotients.

Short division is commonly exhibited before long; but this order should be reversed. The two processes are identical in their procedure; only short division is an elliptical form of long, and should therefore naturally follow it. Long division would present less difficulty, if taken before short, because it would be seen to lead on to, and to explain, short; whereas if the pupil's mind is pre-occupied with short, he derives no assistance from it towards mastering long, and the mere pre-occupation of his mind is an obstacle in its way. In commencing with long division, however, the teacher should not commence with the large divisors which we commonly associate with it, but with the small divisors, 2, 3, 4, etc., employed in short division.

The exercises in division should be graduated like those in previous rules; those being taken first where the partial quotients come out evenly without carrying, as 84648 ÷ 2, and 694623 ÷ 23, then those where carrying is required, then those which involve cyphers.

The proofs of multiplication and division should be given in the same way as the proofs of addition and subtraction. That for multiplication is, that 'in multiplying one number by another, the result, if correct, will be the same in whatever order the partial products are got;' and will accustom the pupil to multiply by the hundreds before tens, and by the tens before the units, as well as in the common order. That for division is, that 'the contained number multiplied by the number of times it is contained will give the containing number.'

Exercises in the multiplication and division of money may here be given; but, not to dwell on these, we shall notice some of the subsequent operations to be studied, which consist of the application of the elementary rules.[1]

376. Reduction.—This process generally delays the learner long, because he is made to learn the tables of value as if they were tables of abstract

[1] *Quart. Journ. Educ.* No. IX.; Tate's *First Principles of Arithmetic;* Lessons on Number, as given in a Pestalozzian School, Cheam, Surrey.

number. We assume that in his preliminary instruction he has acquired familiarity with these, by observation of each individually, by mutual comparison of the units in each table, and by application of them; and that in fact he can construct the tables for himself out of the knowledge thus acquired. If so, the process should present no particular difficulty, as it is simply multiplication and division applied to different kinds of *things*, in obedience to one or two axioms and first principles which he can easily comprehend. An example will suggest what these are. 'In £16, 10s. 6d. how may pence?' (the technical word *reduce* should be explained by putting the questions in language which shows the object of the operation). The principle which has first to be noticed is that of 'partial operations.' It is not peculiar to this process, however, but common to it with all arithmetical processes. The pupil has become familiar with it already. The first step in the operation is to multiply by 20. Why 20? The answer generally is, 'Because there are 20s. in the pound.' But this answer is too condensed in its form to make clear the reason of the step: by itself, it is no more a reason for multiplying than it is for dividing; a more explicit answer should be required, thus, 'Because there are 20s. in 1 pound, we shall have 20 times as many shillings as there are pounds;' and similarly for the pence. Again, change 480d. to pounds; not to advert here to the principle of partial operations, the reason for the first step should be required fully, thus, 'Because 12d. go to the 1s., we shall have just as many shillings as there are twelves in 480, which we find by dividing 480 by 12;' and similarly for the pounds. Further, in proceeding from step to step in reduction, the equivalence of the successive results must be pointedly noticed. Thus, in reducing £16, 10s. 6d. to pence, the pupil is often allowed to say loosely, 'multiply by 20,' and even sometimes (implicitly if not expressly) 'multiply £16, 10s. 6d. by 20.' But in multiplying a number or quantity, we increase it 20 times; which nevertheless is not done in reduction. The necessary limits to the use of the word 'multiply' here will be suggested, if the teacher notices the equivalence of the successive results. The full form of writing the working, which should always be followed in the early operations under any rule, is this:—

£	s.	d.				
16	10	6				
20						
330	6	=	16	10	6,	the pounds changed into shillings.
12						
3966		=	16	10	6,	the pounds and shillings changed into pence.

The changes are in form merely and not in value. Similar remarks apply to operations with all the other tables of weights and measures. Success in teaching reduction will depend on the clearness with which the pupil is led to perceive these first principles, and the explicitness and constancy with which he is accustomed to refer all the steps of his operation to them:

as also on the gradation of the exercises within the same table of value, and on mastering the operations with one table before proceeding to another; for an understanding of any one will serve as a key to others.

377. Applied Questions.—After the four elementary operations and reduction, the text-books commonly give miscellaneous applied exercises in what has been learnt; which are capable of affording the greatest benefit to the pupil, if they be properly handled. The following question is one of the simplest which can be given:—'If 6 yards cost 18s., what is the price of 24 yards?' Many pupils will tell the answer at once, and all of them after one or two preliminary questions such as these, 'If 6 yards cost 18s., what will 12 cost? 18? then 24?' They will simply give the result, however; and, in most cases, will think it strange to be asked any reason for what seems so obvious. And yet this reason, which is so generally taken for granted, is just the point that should be brought into prominence. So that when the teacher puts such questions as these above to lead the pupil to the answer, he should not be content with the mere results, 12s., 18s., or 24s.; but should have the prices stated in terms of the price of the first quantity, thus 'twice as much,' 'thrice,' 'four times,' etc. In each case the principle of the numerical process to be used should be required in general terms, apart from the peculiar figures of the problem: here it is, 'So many times the quantity must cost so many times the price of the quantity.'

The following problem involves two steps, though of the same sort as the last:—'If 6 yard cost 18s., what will 7 cost?' the two quantities being incommensurate except by unity. A few questions will show the pupil that he cannot give the answer at once, and why. The teacher then explains that, if the price of 1 yard is known, it is but a single step to find the price of 7; and that, as that may always be found, the general plan of working such problems is to pass through *unity* (which is the common measure) of the quantities involved. If 6 yards cost 18s., what cost 3 yards? half as much; 2 yards? one third as much; 1 yard? one sixth as much; and how do we find the sixth part of a thing? by dividing by 6:—the principle here being that the 'price of the whole' divided by the 'No. of yards' gives the 'price of one.' Then if 1 yard cost 3s., what cost 2 yards? twice as much; 4 yards? four times as much; 7 yards? seven times as much: 'and how do we find seven times as much?' by multiplying by 7: thus the answer is 24s.:—the principle here being that the 'price of the whole' is the 'price of one' multiplied by the 'number.' The same kind of reasoning is employed if the teacher prefer to pass through the *common multiple* of the quantities involved, instead of their common measure; thus, if 6 yards cost 18s., what will 7 times 6 yards cost? 7 times 18s.; and then, what will 7 times 1 yard cost? 7 times 3s., or 21s.

Once more the following problem, already quoted, § 368, implies three steps of reasoning: 'How much will a man, who is 20 years of age, whose weekly wages are £2, 2s., and who spends £20 per quarter, save by the time

he is 30?' *First*, 'What he *saves* in the time is the difference between what he *receives* in the time and what he *spends* in the time;' *second*, 'What he *receives* in the time is what he receives in a week taken as often as there are weeks in the time;' *third*, 'What he *spends* in the time is what he spends in the quarter taken as often as there are quarters in the time:' these three considerations determine the main operation to be subtraction, and the subsidiary ones to be multiplication. If the problem be solved by finding as an intermediate step what he saves in one quarter, and then by repeating that as often as there are quarters in the time, there are still three steps involved; but, as already indicated in speaking of applied questions, the pupil should be allowed to choose his own way in the first instance.

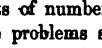
In the second of the above problems, the two steps involved are co-ordinate; in the third, one is leading, and the other two subordinate to it; one determines the relation which the data are to assume towards each other with a view to the answer, the others determine the form into which the data are to be put preliminary to the computation. In all problems which can be set at this stage, the result is reached by one, two, or three (seldom more) steps of reasoning. The inclination of the pupil is to think of the *result* alone; so that, granting that he succeeds in problems of the simplest kind, his success in those which are more complex is very much a matter of chance. When he has been educated so far as to look for a reason, he still tends, in problems involving more than one step, to give effect to that which first occurs to him before giving effect to that which is the most important: he must be educated, therefore, to discriminate between them as chief and as subordinate, and to provide for the *structure* of his solution before he begins to touch the data. By far the greater number of errors made in working arithmetical problems arise from his failing to apprehend the steps of reasoning in their connexion, and to see the elementary operations required to give effect to them. Whether as regards correctness of results, therefore, or the mental benefit to be derived from the exercise, the teacher should estimate the character of his expositions by the degree of familiarity which he gives the pupil with the first principles of reasoning which they involve.

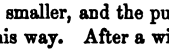
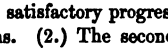
378. Practice.—A third application of the elementary operations is that process to which the name 'Practice' is given. In taking it up for the first time, the steps in the exposition are the following:—(1.) Take an example, as 1270 gallons at £2, 17s. 6d. per gallon; the pupil will naturally incline to work it by multiplication; the object of the process now to be taught is to find a shorter way of attaining the result.—(2.) The principle of 'partial payments' to be illustrated by easy examples: thus, if for one yard of cloth I pay down 1s., then 6d., then 3d., then ¼d., what do I pay in all? If 20 persons pay as their fare £1 each, then 10s., then 2s. 6d., what is the fare paid by each? and so on.—(3.) Then proceed to work the example, 1270 gallons at £2, 12s. 6d. per gallon, in a series of steps as suggested by the form annexed,—

Galls.	£	s.	d.		1270
					2
1270 at . . .	2	0	0	2	2540
„ at		10	0	½	635
„ at		2	6	⅛	158 „ 15
1270 at . . .	2	12	6	=	3333 „ 15

in which there are three of the elementary operations employed, as suggested by so many first principles of reasoning. These must be pointed out and illustrated in going from step to step in the working; and, when the answer is got, the class should be cross-examined on the whole, till they can account for every step. A few more examples should be wrought with the same fulness of statement.—(4.) We may commence with questions in which the price consists of only shillings and pence: it is more material to observe that with whatever kind of question we begin, we should adhere to it till the pupil has become familiar with the process. And it is expedient to take the successive payments as parts of the £1 or 1s., as the case may be, for some time before taking parts of the intermediate payments.—(5.) The pupil should be required to write his working in the full form above given for a considerable time. This involves very little additional trouble to what is required in the contracted way; and the principles of working are kept more prominently before his mind.—(6.) It will be time enough to give him the name of this process, when he has learnt the process. It is undesirable to give the name first, for he can hardly divert himself of the idea that a new name must mean a new operation; whereas this process implies no new operation whatever.

It may be remarked here, as applying equally to the three processes now explained, that, when the pupil is working at the desk on his slate, he should be required to write down in words after each step what that step denotes; and in any home-exercises that are prescribed, to exhibit, in addition to this fulness of statement, the greatest carefulness and neatness of execution.

379. **Vulgar Fractions.**—In the three processes last mentioned, the pupil has been dealing with the halves, and third-parts, and fourth-parts, etc., of quantities; which implies that he has had a notion of what a fraction is. His preliminary instruction gave him this general notion of fractions or parts of numbers; but he has not been technically operating with these. The problems set before him are supposed to have been so constructed as to avoid the necessity of this; thus in division, when remainders occurred, they were allowed to remain undivided. (1.) The pupil's conception of a fraction should be refreshed by the same means by which it was first given, viz., by visible illustration. When he is shown, *e.g.*, what ½ of 1 is (let the full name be used for a time), by reference to a line divided into parts thus  , he should be practised in the notation of fractions *by* being required to write on his slate the symbols for various fractions in-

dicated on the board by such divided lines, and conversely, by drawing such lines on his slate to indicate the value of fractions whose symbols are set down on the board. Here, as in the notation of integers, he has three things to associate, the value of the fraction, its name, and its symbol. This done, there are two prepositions relative to the *forms* of a fraction, on his perception of which his whole subsequent operation with fractions will depend for its intelligence. (1.) The first is that which is embodied in the statement that $\frac{2}{3} = \frac{4}{6}$. This must be shown by visible illustration. The pupil should draw on his slate, whilst the teacher draws on the board, a line on which he marks off $\frac{2}{3}$. Then each part must be halved; let him count how many of these new parts are in the line; say what each is therefore called; and how many are in the $\frac{2}{3}$; thus  . Many examples should be taken, including some which proceed from smaller parts to greater, as well as from greater to smaller, and the pupil should be required to illustrate them on his slate in this way. After a wide enough induction, his attention is called to the numerical process as such; and he learns its expression, 'that a fraction is not altered in value when each of its terms is multiplied or divided by the same number.' Exercises are given in various forms; thus, find a fraction equal to $\frac{2}{3}$, but expressed in larger numbers; find another such; find one of the same size as $\frac{2}{3}$, but expressed in less numbers; in $\frac{2}{4}$, if each part be halved, or divided into three equal parts, how many of each respectively are required as an equivalent; in $\frac{1}{3}$, how many fifteenths; twelve parts are wanted out of $\frac{1}{3}$, what is each part; express $\frac{2}{3}$ and $\frac{3}{4}$ in parts of the same kind; in other parts of same name; express $\frac{2}{3}$ and $\frac{5}{6}$ in the largest parts of the same name.—This proposition is the means by which addition and subtraction of fractions are performed; and all the time and pains bestowed on its illustration will be amply repaid by the satisfactory progress of the pupil when he advances to these two operations. (2.) The second proposition is that by which we regard $\frac{1}{2}$ (*i.e.* $\frac{1}{2}$ of 1) as equal to $\frac{1}{2}$ of 2. The illustration of this is obtained from a line divided thus:  . The pupil may construct similar illustrations in other cases for himself.

380. Elementary Operations with Fractions.—The working of *addition* and *subtraction* depends, in the general case, on the first of the two propositions named. It is not the actual adding or subtracting which perplexes the pupil, but the preparing of the terms for the purpose. If he be properly taught to change fractions into equivalent ones beforehand, this difficulty is anticipated. And it only remains for the teacher to graduate the exercises judiciously. (1.) The simplest are such as $\frac{2}{7} + \frac{3}{7}$; many of which should be wrought orally and also on the slate without the ordinary fractional notation, but with the denominators expressed in words, special notice being taken of the fact that the adding of the two quantities of same kind does not change their name, any more than when shillings or tens are added. This preliminary exercise will save him from the common error of adding the denominators as well as the numerators, when he comes to work them with the ordinary

notation. (2.) Then exercises should be taken in which the name of the one fraction is a multiple of the other, thus $\frac{1}{2} + \frac{1}{4}$, etc. (3.) And lastly, those where the names of both fractions have to be changed, as in $\frac{2}{3} + \frac{1}{4}$. —The same remarks apply to subtraction; it may only be noticed as particularly applying to this operation, that the pupil should be exercised in comparing two fractions, so as to be able to say at a glance which is the greater and which the less, thus $\frac{3}{4}$ or $\frac{5}{6}$, $\frac{5}{7}$ or $\frac{4}{5}$, and giving the reason apart for the numerical operation to determine the fact.—The working of *multiplication* and *division* depends in the general case on the second of the propositions above named. (1.) The first kind of questions to be wrought are those in which a fraction is multiplied or divided by a whole number, as $\frac{2}{3} \times 4$ and $\frac{2}{3} \div 2$, in which there is no new operation (for 2 thirds is multiplied by 4 just as 2 shillings or 2 tens would be), but only a matter of notation to attend to; notice being taken of the fact that the name of the quantity multiplied or divided is not changed by the operation here any more than in dealing with integers. (2.) Exercises should then be set such as $\frac{2}{3} \times 3$ and $\frac{2}{3} \div 5$, in which (though in the former the result may be got at two steps in a direct way, thus $\frac{2}{3} \times 3 = \frac{6}{3} = 2$) the operation is best performed indirectly. Illustration of both the direct and indirect modes may be had from money operations; thus we may multiply 2 pence by 12, either by taking 24 pence and reducing that to shillings, or by at once taking 2 twelve-pences or shillings. (3.) It is in multiplying or dividing one fraction by another that we found upon the proposition that (*e.g.*,) $\frac{2}{3}$ of $1 = \frac{1}{3}$ of 2. Thus in multiplying $\frac{2}{3}$ by $\frac{4}{5}$ we say $\frac{2}{3} \times 4$ (principle of partial operations) $= \frac{2 \times 4}{3}$; then as we have to multiply not by 4 but by $\frac{1}{5}$ *of* 4, this product must be 5 times too great and the real product only $\frac{1}{5}$ of it, thus $\frac{2 \times 4}{3 \times 5} = \frac{8}{15}$. So in division, $\frac{2}{3} \div \frac{4}{5}$, we first say $\frac{2}{3} \div 4 = \frac{2}{3 \times 4}$ (partial operations); then, as we have divided by 4 instead of by *its fifth part*, that quotient is 5 times too small, and must therefore be multiplied by 5 for the real quotient, $\frac{2 \times 5}{3 \times 4}$. After a pretty wide induction upon examples in both operations, the rules should be given, their connexion with the principle being noticed; but not till then.[1]

381. Proportion.—(1.) The first object is to give the pupil a conception of that relation existing amongst four numbers which is called Proportion; and this is not more difficult than to give him a notion of any of the elementary operations of arithmetic. Indeed, as was observed in speaking of the idea of a fraction, they have been acting upon it already, *e.g.*, in the applied questions and in practice. They are accustomed to the principle that the price of a quantity must vary with the quantity; and therefore that 'as 2 yds. is double of 1 yd., so is the price of 2 yds. double

[1] *Quart. Journ. Educ.*, No x.

the price of 1 yd.;' 'as 15 is triple 5 yds., so is the price of 15 yds. triple that of 5 yds.;' 'as 12 oranges are 6 times 2 oranges, so is the price of 12 or. 6 times that of 2 or.;' 'as 2 hours is half of 4 hours, so is the distance travelled in 2 h. half of that in 4 h.' And what they have to learn here is just that we express these relations more concisely by saying that 'as 2 yds. is to 1 yd., so is the price of 2 yds. to that of 1 yd.,' or that 'as 12 oranges is to 2 oranges, so is the price of the 12 to that of the 2;' and that, as arithmetic uses symbols to denote this as well as all other relations of number, the symbol adopted is '2 yds. : 1 yd. :: price of 2 yds. : price of 1 yd.;' and so on.—(2.) This relation may then be applied to abstract numbers in a series of simple examples; thus,—

As 2 is half of 4, so is 4 half of 8, or 2 : 4 :: 4 : 8
6 is one third of 18, so is 12 of 36, or 6 : 18 :: 12 : 36

And then, as in dealing with previous parts of notation, exercises must be given in various forms to establish the association in the pupil's mind between the relation itself, the words that express it, and the symbol that denotes it. Thus the teacher sets down a proportional relation on the board in words, and requires the class to denote it in symbols; or *vice-versâ;* or he requires the proportionality to be denoted in all the ways in which it holds; thus, if 2 : 4 :: 4 : 8, then 4 : 2 :: 8 : 4, or 4 : 8 :: 2 : 4, or 8 : 4 :: 4 : 2; or, in various forms of language, he gives three of the terms and requires them to find the fourth by inspection; or he gives two, and requires other pairs. These exercises are all done by inspection, whether orally or on the slate. (3.) The next thing to be taught is the *rule of the products:* the necessity for such a rule being easily shown from such an example as 3 : 10 :: 12 : ?. For which purpose, he explains the terms *extremes* and *means,* and by induction from a series of easy examples makes them aware of the fact that the product of the extremes is equal to the product of the means: and then to impress it, he leads them to apply it as a test of proportionality. Thus, is this a just proportion, 3 : 5 :: 7 : 12? and so on. (4.) The next step is to derive from this the *rule* to find a fourth term from three given ones. If $2 \times 8 = 4 \times 4$, then, dividing each by 2, $8 = \frac{4 \times 4}{2}$; or, by 8, $2 = \frac{4 \times 4}{8}$; or, by 4, $\frac{2 \times 8}{4} = 4$. They should then be made to find *by rule* fourth terms in the simple examples in which they have already determined it by inspection: the verification which they obtain in these cases will impress the rule on their minds, and give them the more confidence when they apply it to cases where inspection cannot help them. (5.) In working problems by proportion, the teacher should, as in other processes, not be content with the mere statement of the proportion, but require an enunciation of the first principle which guides it. Thus in the problem, 'If 8 yds. cost 40s., what cost 33 yds.?' the principle is, 'As 8 yds. is to 33 yds., so is the price of 8 yds. to that of 33 yds.,' which should be followed by translation into symbols, thus,

8 yds. : 33 yds. : : 40s. : ? . Again, in the problem, 'In what time will 17 men do a piece of work which 10 men can do in 7 days?' the principle is, 'The more numerous the men, the less time they will take,' and hence 'As 17 men to 10 men, so is the time of 10 men to that of 17,' which, translated, gives the statement, 17 : 10 : : 7 : ? . This last problem is chosen to show that inverse proportion admits of the same treatment as direct; though at its first occurrence it will require to be dwelt upon in various illustrations to familiarize it to the pupil's mind. If the working is pursued in this spirit, he will discern for himself the convenience of placing the term sought in the fourth place, and the propriety of having the pairs of terms homogeneous.

We cannot pursue these illustrations of the several rules further; but enough has been said under the rules which have been selected to guide the teacher in dealing with the rest.[1]

382. Facility of Computation.—The teacher expounds the rules to his class on the board collectively: in doing which his object is simply to reach their intelligence. In the *practice* which he provides for them, he has, as already indicated, a double object, intelligent working and facility in computation. To secure the former is the object which he has chiefly in view when he works problems fully on the board with their assistance, and also in the exercises which they perform at their desks from the text-book and at home; in which, accordingly, they should be required to exhibit the steps of all the processes clearly and with reasons annexed. To secure the latter in addition, he has recourse to exercises of a different complexion. The first are those of mental arithmetic. The value of oral exercises in aiding the pupil in his comprehension of the rules must have sufficiently appeared in course of the remarks on the method of explaining the several rules; for this purpose, indeed, they are not only advantageous, but indispensable. But in order to give facility in applying the principles, and to keep in the pupil's memory the processes he has learnt, these exercises should be systematically given during the whole course of study. Their great recommendation is to be of as practical a kind as possible; in fact, 'shopping' questions. The second are slate-exercises performed by the class to the teacher's dictation. In conducting these, his first duty is to dictate judiciously, *i.e.*, slowly and clearly; for he should bear in mind that the writing down of the exercises correctly to dictation is not the least proof which the pupil gives of his intelligence of

[1] *Min. Counc.*, 1853, vol. II., p. 928; Boston Educational Lectures, 1831.

them. During working, he must be careful to prevent the pupils from assisting each other by whispering or copying. The best preventative of this is a good *morale* in the class; where this is wanting, nothing else will avail. Let him aim at this, rather than at making the fault impossible by any mechanical arrangements, which is not discipline at all. On the other hand, it is an obvious consideration that he should avoid any arrangements which throw temptation in the pupil's way, and that he should, in any case, exercise that degree of watchfulness which even the most virtuous inclination requires as a support. Any fault of this kind should be treated in a very serious way; for in truth it affects the honour of the class, which a judicious teacher will seek to maintain as intact as his own. In these exercises the teacher should allow what he considers a reasonable time for working, at the expiration of which all should be required to cease working; if he wait till the very last pupil is finished, much time will probably be lost by the class as a whole. If he proposes to work the exercise on the board, he should have a well-understood plan according to which each pupil takes his share in the work; if not, he has only to ascertain the results of the class-working. In estimating these, he should bear in mind that *each of the three* criterions should be regarded according to its importance, viz., accuracy, rapidity, and neatness.

CHAPTER IX.

GEOGRAPHY.

383. First or Preparatory Stage.—For the purposes of teaching, this subject may be conveniently considered in three stages.

The object of the earliest instruction in geography is to acquaint the pupil with the elements of geographical description; by directing his attention to the features of the landscape around him, and putting him in possession of the terms by which these are denoted.

He should be led to observe the parts of the natural scenery of

the district in which he dwells; as mountain, river, plain, lake, forest, sea-shore, village, town, and the like. He should commence to observe these just at the points where he is most familiar with them: the river, for example, from the bank over against his own door, whence he can see its water dark or clear, deep or shallow, smoothly flowing or eddying, its channel level or sloping, pebbly or rocky, broad or narrow, its banks steep or flat, rocky or grassy, before he traces its course upwards to its sources in the hills, or downwards along its gradually-increasing volume to the sea. His first ideas of mountain are gathered from the hill which he is accustomed to climb; this he thoroughly explores before he visits in imagination the steeper and loftier hills beyond it. And the sandy beach, or the rough shingle, exposed by the ebbing tide in front of his own home is that part of the endless shore to which he first turns with the deepest interest. It is no mere general observation we are to require of him: on the contrary, it must descend to minute details, if the descriptions of scenery he will subsequently meet with are to have any reality for him. His conception of 'rivers,' *e.g.*, must embrace such elements as these:—their source in the obscure springs amongst the hills or their outflow from lakes—the many streams which combine to form them—the length and deviousness of their course—the gradually-increasing width, depth, and volume of their water—their windings within the channels or their widenings into lakes—their clear low waters in summer, and their swollen angry torrent in winter—the character of the land through which they flow—the villages and towns on their banks—and the various uses, social, industrial, or commercial, to which man puts them. His conception of 'mountains' must include their shape, whether high or low, steep or of gentle ascent, a single hill or one of a range, earthy or craggy—the covering of their surface, whether grass, heath, or shrub—the streams which may leap down their sides—the climate varying with the height—the metals or minerals dug from them—the toil of their ascent and the nature of the view from the summit. When all the parts of the landscape have been illustrated in this way, the terms that denote them cease to be mere words, and offer to him realities on which his mind can dwell: and he will be able to combine them so as to understand what is affirmed of a country, when it is described as hilly,

undulating or flat, bare or woody, dry or well-watered, cultivated or pastoral.

In addition to the features of the landscape, he must be led to observe the cardinal points, climate, and the phenomena of the seasons. The four directions, north, south, east, and west, he should be made to distinguish by reference to the position of the sun at mid-day. In learning the elements of climate, he will have to observe heat and cold through their varying degrees; sunshine and cloud; calm wind and storm; drought and rain; frost, hail, snow, and ice. And a proper observation of the seasons teaches him how these elements of climate are distributed through the year; their effects on the earth as shown in spring, summer, autumn, and winter: the course of the sun in the heavens, and the difference in the length of day and night.

The landscape and its climate must be studied, however, in connexion with the life, whether of animals or of man, which they sustain. The course of instruction should, therefore, notice the principal animals of the district, their habits, and the adaptation of the district to these habits. And the highest end of all is to observe how the district and its climate influence the industry, the habits, and, through these, the character of its inhabitants; how, *e. g.*, the rich soil prompts him to tillage, what it yields him, and how he uses its gifts; or how its mineral wealth leads him to descend below its surface, and how he brings to light the iron and the coal which so much affect his comforts; how the green hills and slopes attract him to pastoral pursuits; the coal-mine or the stream to manufactures; and the river to commerce in its innumerable forms. Then, as depending on the soil, its climate, and products, should be observed in detail his modes of life and habits as exhibited in the kind of houses he dwells in, the food he eats, and the clothing he wears.

384. Comparison of Things abroad with things at Home.—This instruction exercises his observation and power of comparison: his observation mainly and in the first instance, his comparison subsequently. His own neighbourhood supplies the materials upon which the whole is grounded; his observation of it shows him the elements out of which all landscapes whatsoever are constructed. These may occur in other countries on a larger scale than that in which they are to be seen in his district; but, as they are the

same in kind, he can now pass by comparison from the one to the other. They may occur in other countries in very different combinations from those with which his observation has acquainted him; but, all the materials being in his possession, his imagination will, under judicious guidance, enable him to construct combinations equal to the variety of nature. From the gentle eminence on whose sides or summits he sees the cattle grazing, he can pass to the hill whose top ascends a summer day's climb, leaving fields, cattle, and houses in silence below; and thence to some lofty alp, with its fertile valleys and lower slopes, its hardy forests above, and its top lost in everlasting snow. The stream which flows through the village common, with its pools and bendings and eddyings, will help him to realize the other rivers of his own country, on whose bosom the tall vessel conveys the wealth of foreign lands; which, again, he will expand into the mighty current of the Amazon or Mississippi, seeming river and sea in one, and watering a whole continent, its banks studded with a hundred busy cities or clad with the yet untouched riches of natural vegetation. And thus it is that the plain on which he dwells, whether cultivated or covered with wild grass and heath; the gathering of waters in some neighbouring pool; or the little islet standing off from the sea-shore, will serve to carry his thoughts to the largest types of these which nature exhibits. In the hot summer day at home he may fancy himself beneath the scorching blue sky of the tropics with its overpowering heat of day and dew of night, and gazing on the luxuriance and gorgeousness of its vegetation; whilst from the winter's day at home he may realize to some extent the dreary desolation of the Arctic zone and its short cheerless days, its freezing temperature, its wilderness of ice, its stunted vegetation, and its dearth of animal life. Not to pursue further so fertile a subject, if he has observed how the animal life of his own country is adapted to its circumstances, and how the occupations and habits of his own countrymen are influenced by their soil and climate, and vary, it may be, with the changing season, he will be both pleased and instructed as he is led to notice the habits and structure of the countless animal tribes that roam the earth, and to contemplate the occupations and manner of life of the various races of men as determined by the circumstances in which their lot has been

cast. It is when everything abroad is thus referred to its counterpart at home known by observation, that geography becomes the study of realities, whether inanimate or living; in other words, becomes an educative study, both mentally and morally considered. "The knowledge of geography which is best adapted to elementary schools, most likely to be understood by children, to interest them, to remain with them, to form the subject of future reflection, become a topic of continual interest and a means of perpetuating that process of education which is but commenced in childhood; consists in the knowledge of matters concerning other parts of the world and the people who live there, of like kind with those things which are familiar to the observation of the child in this part of the world."[1]

385. Names of Places.—Geography is not at this time the study of locality; yet the names, both of countries and of their remarkable features, together with some general indication of their position, are not to be altogether avoided. This is hardly possible, even if it were advisable. Thus, in learning of rivers, he listens to a description or some story of remarkable rivers, such as the Nile or the Rhine, and their names are carried into his mind by the interest of the lesson, so that they are not strange to him when at a subsequent time he has to learn their geographical position: so with the mountain and forest and other features of the landscape. And when his attention is turned to the animals or to the trees and shrubs of foreign countries, he associates the countries themselves with these: Africa with the lion, Lapland with the rein-deer, Arabia with the camel; China with tea, Jamaica with coffee, Bengal with rice, and America with cotton. But, at this period, he learns those names only incidentally and as illustrative of their features or productions; he associates the country with the object and not the object with the country.

386. Pictorial Illustrations.—Maps should not be used at this period, since the exact position of the several countries is not the object of study; so far as position needs to be defined, it will be sufficiently so by using the four cardinal directions and the various terms characteristic of climate as connected therewith. The pupil could form no idea of position from them, since he does not

[1] *Min. Counc.* 1847, vol. i., pp. 31, 32.

know what a map is. But, to assist his imagination in constructing the various scenes described, it is desirable to use pictorial illustration largely: not merely pictures of particular objects, but pictorial maps representing the combinations of natural and social features with which the different countries are associated. "Thus the map of Arabia should be a picture exhibiting the desert, with the caravan, camel, and the Arab in his national costume. On the same principle, Egypt should be represented by its river and its pyramids; India by its rice-fields, its jungles with their fierce inhabitants, its mountain passes and elephant-trains; China by its tea-plantations; North America by its sugar and cotton-fields; Lapland by its rein-deer and snow-sledge, and gloomy sky; Switzerland by its jagged peaks and chamois-hunter; and our own country by its several scenes of river crowded with shipping, busy factory, and the pursuits of agricultural and pastoral life."[1]

387. **Second Stage—Introduction of the Map.**—The distinguishing feature of the second stage of this study is that whilst it continues the descriptive process which characterizes the first, it introduces the element of locality or position on the earth's surface. And as the earth's surface can only be intelligibly referred to through a representation, the first question which meets us at this point is, how the pupil is to form a correct conception of a map? For it is self-evident that unless he do this, he can learn nothing intelligently through a map.

The pupil knows already—particularly if he has received instruction in form—what is meant by *representation* in general. He can recognise a house or a tree in its representation, on whatever scale it be constructed. We must view the map as a representation of a country, made on a small scale for the same reason that the representations of other objects are. But his difficulty in regard to it is that he is not, as in the case of other objects, familiar with the original. It is essential that this difficulty be removed; he will never comprehend the sign unless he knows the thing signified. Hence the teacher who is able to present him, in the first instance, with a map of the schoolroom with all its furniture in position, either by having such a map amongst his apparatus, or by drawing it upon the board, has a great

[1] *Early and Infant School-Education*, Part II. chap. iii. sect. 5; *Min. Counc.* 1845, vol. i. pp. 233-40.

advantage. The comparison of the schoolroom itself with its map will alone go far to remove the obstacle which besets the pupil at the beginning of his path. Next to such a map—and first in order of all, if such a map be wanting—should be used a map of the district or town in which the school is situated. The pupil is familiar with the features of both; if he is not, or if he requires to be made more familiar, he should be made to observe them narrowly. When he has thus observed the position of the neighbouring hill, stream, plain, railway, farms, and lanes, in the one case, or of the most important buildings and streets in the other, with the directions in which they lie, he should be brought to the map, and required to verify both the position and direction of the whole, and to detect the correspondence between the parts of the thing represented and the parts of the representation: in fact, made to go through the process of constructing the map. He should be exercised upon this map until his eye is quite accustomed to the notation used in map-making, and until he has thoroughly made the association between the places and their signs. In passing on to the next map which should be laid before him, the map of a whole country, he has in a great measure surmounted the difficulty peculiar to his comprehension of it, viz., how a representation can be made of an extent of country greater than what the eye can take in at once. The former map represented his view from the adjacent hill-top: it will be easy to carry him in imagination to a more elevated point from which the whole country would be visible, or he may be taught to look upon the map of the country just as a combination of so many district maps. It is to be borne in mind that this map is presented to him at present, not that he may study its geography, but to complete his idea of what a map is. The only questioning upon it, therefore, that should be given, is that which asks him to point out places adjoining his own district or town, if such be represented, and that which is designed to familiarize his eye to the notation, by asking him to point to any mountain-ranges which he sees, river-courses, coast-lines, and towns, without reference either to their names or position. If it be worth while—which it certainly is—to give the pupil a correct idea of a map at the outset of his course, this seems the only way of doing it: the imperfect success which

would attend his efforts, and the consequently small interest he would take in their result, ought to have prevented the suggestion which has been made, that he should come by his idea of a map at this period by map-drawing, in the literal sense of the word.[1]

388. Latitude and Longitude.—At what period in his instruction the map of the world should be used, is a question that will be considered presently. The use of it, however, will require the explanation of the lines of latitude and longitude; and the mode of giving this may therefore be considered here. The pupil must be led to feel the want of them, and to go through the process of constructing them. Perhaps the simplest apparatus for explaining them is a small black ball. If a point be made on this with the chalk, and the pupil asked to define its position, he will feel at a loss to do so: if he makes the attempt, he can easily be shown that he has no sufficient data. But if a circle be drawn on the surface of the ball through its poles, and another, and another, and so on, and these numbered, he will immediately lay hold of these to help him in fixing the position of the point: let him be shown how far they do help him, and what is still wanting. Then let a great circle be drawn in a plane at right angles to that of any of the former ones (equatorial circle), and a series of smaller circles in planes parallel to that one, and these numbered; his means of defining the position of the point are now very definite, and they become more and more so the more numerous the circles are. These circles correspond precisely to meridians and parallels, and are the only possible way of defining position upon a sphere. Such illustration will prepare him for understanding these lines, when he sees them upon the globe. Should the teacher not have such a piece of apparatus with him as this ball, he may make the black-board serve the purpose; by drawing upon it vertical and horizontal lines to which to refer the position of any point that may be placed upon it.

389. Order of Instruction.—Supposing the pupil to know what a map is, in what order should maps be used for the purposes of instruction? Should he be confined, in the first instance, to the map of his own country to learn its topography minutely, or should he be introduced to the map of the world that he may

[1] Thayer *On Teaching Geography*; 'Geography' from Raumer's *History of Pedagogy* Barnard's *American Journal of Education*, No. 20; *Quart. Jour. Educ.*, No. xi.

acquire some knowledge of its surface in general? The former course may be supported by appealing to a principle which we have recognised, viz., that his attention should first be directed to what is around him. But it has been so already, so far as it ought. He has acquired his conception of natural features by reference to what he sees around him, and so likewise his conception of geographical position. This is what is meant by beginning the study 'at home;' and not the acquisition of details in topography, a task for which he has no relish at this time, whether it be the topography of his own or of other lands. Considering the knowledge of physical phenomena he has already acquired, his imagination should now be sent abroad, that he may picture to himself what is remarkable in the landscape, productions, and inhabitants of the earth. And whatever distance he has to bridge over to reach other countries, these topics cannot be said to be of remote interest to him, if only they be constantly illustrated by reference to the similar things he has seen at home.

If we are to speak of the surface of the earth as a whole, we must use a representation of it as a whole. This cannot be so easily comprehended by him as the representation of a single country; but his intelligence will be satisfied at this time if we demonstrate to him by familiar proofs the shape of the earth, then exhibit to him the terrestrial globe, and explain the map of the world, whether the hemispherical map or Mercator's Projection, by reference to it.

The order of topics in this course of instruction may be shortly stated thus:—The distribution of land into continents and of water into oceans, and the proportion of the one to the other; the distribution of continents into countries and of oceans into seas; the chief features of the countries in respect of rivers, mountains, plains, deserts, forests, lakes, and coast-line; and of the seas in respect of bays or gulfs and islands; the distribution of heat and cold, day and night, over the earth, and of winds, currents, and tides over the seas; the most remarkable productions of the soil, whether vegetable or mineral, in different countries, and the principal forms of animal life in the different regions both of land and sea; the chief industrial occupations of the different peoples, with the circumstances that determine these, and the manner in which they dispose of the products of their industry;

together with what is remarkable in their character, civilisation, and modes and habits of life, particularly as these are determined by the country or climate which they inhabit. Amongst the various countries is included, of course, our own; which should be studied with greater minuteness than any other. The filling up of this outline implies a pretty extensive course of instruction: should the pupil leave school without advancing further, he will carry away with him such a knowledge of the subject as will serve most of the purposes for which it is taught in school at all. He will know enough to read a newspaper with intelligence, to listen to oral discourses on subjects of general interest, and to take part in those public or private discussions which enter into the public life of the citizens of a free country; whilst it will further enable him to understand and sympathize with the benevolent schemes of missionary enterprise pursued by the Christian church. The teacher who thus makes it his aim to inform his pupils in the broad elements of physical, commercial, and, if we may so call it, 'moral' geography, and who looks upon the geography of names and locality as of value only in subordination to these, will confer a service upon them, whether as regards their education, their information, and the development of their human sympathies, infinitely beyond what he would do, were he to store their memories with the exact heights in feet of all the mountains, and the length in miles of all the rivers, between the North Pole and the South, or the exact areas of all the countries, the names of all the towns, and the numbers of the several populations, between Greenwich and Greenwich again.[1]

390. Characteristics of Teaching.—It is unnecessary to remark now that it is not so much the *map* that is to be taught, as the several countries with their features *through the map*. Such a delineation is a means, not an end; and no knowledge can be more worthless than the knowledge of so many lines, straight and curved, and the position of so many spots, upon the map alone, if they are not suggestive of the realities of nature. There are two features in geographical teaching which the teacher should constantly keep in view. The one is, that he should *describe* largely; and his description should follow the order in which nature has arranged her own elements, rather than in the order in which man

[1] *Min. Counc.*, 1853, vol. ii. pp. 838, 839.

may have parcelled them out. Rhine, Danube, and Amazon are nothing at all to the pupil, unless he thinks of their flowing waters, adorned on their banks with the romantic scenery of hill, castle, or forest, dotted with many cities, and bearing on their bosoms in ship or raft the varied products of a country or continent. Further, "when the political divisions of the earth's surface were used, as under the old methods, in classifying the descriptions of mountains, rivers, etc., the Rhine, for example, had to be mentioned in the descriptions of no less than twenty-two countries and small states; and the pupil was left to put together for himself, as well as he could, a single picture of the river out of these twenty-two scattered notices. Again, if we are to consider as one, and in one description, not merely the whole Rhine, from its sources to the North Sea, but also all its tributaries, the Neckar, Maine, and Moselle, etc., we should in this case mention not the extent of the domains of kings and princes, but only the great domain of old King Rhine himself."[1] What has been said of this river may be applied to every other feature of the landscape. It is to no purpose to have learnt the names of Alps and Andes, unless these names suggest the mighty masses towering into the clouds, interspersed with sunny fertile valleys below, and as being in their higher regions the dwelling-place of storms, the seat of everlasting snow; and they must be viewed not in detachments, but as a whole. So with regard to plains. Views of nature must be given, before we speak of the conventional subdivisions which man has constructed. A similar spirit of teaching must be followed, when we come to consider the geography of towns, the seats of man's industry. A commercial city should be described with all its outlets and in connexion with the places with which it is in communication, instead of each being mentioned separately, and the pupil allowed to learn their relations as he best can: and a manufacturing city in connexion with the mineral districts on which its importance depends. It has already been stated—but it cannot be too emphatically stated, for it holds good in every stage of the pupil's progress—that the great instrument for giving reality to the pupil's conceptions in descriptive geography, is the comparison of the unseen with the seen.

[1] Raumer.

The other feature of teaching is, that the pupil should frequently be questioned away from the map. He will not have the map always beside him in his future reading; so that if his geographical knowledge is to be available to him at all, it must be so well impressed on his mind as to enable him to dispense, in general, with the map.

391. Locality and Relative Position.—Though a knowledge of locality can have little value except in subordination to a knowledge of the things 'localized,' and though it is often taught out of all proportion in respect to the time occupied in it, it might often be taught with greater judgment and to more practical purpose. The object of it is simply to impress upon the pupil's mind a picture of the map of the world, so far as he learns it; so that, for example, he may know in what direction he would have to sail to go to America, or any European country, in what way the different continents lie on the earth's surface, and how the principal towns in his own country are situated from each other; to *arrange* his geographical knowledge, in fact, instead of throwing it into his mind *in a mass*. He has not often the means of referring to a map, when he meets with allusions to places or countries; he should be so taught, therefore, that what he learns shall be available for the purpose of illustration away from the map. It is quite true that there is a danger of burdening his memory with facts relating to locality beyond what it can retain. Much must be left to a subsequent stage of progress; yet at this point the judicious teacher can select much which the pupil can easily retain, and which will help him in retaining the general information that is communicated to him. The relative position of adjacent countries, and of towns within the same country, is impressed at a more advanced stage by map-drawing: at this time it is enough that the pupil be made to observe the map closely, and his observation be tested by requiring him to answer questions on locality away from the map.

If he has to leave school before the map of the world is sufficiently impressed on his mind, he should at least carry with him the ability to interpret such a map. The lines of latitude and longitude should be thoroughly known to him, and the manner of using them. The following questions will sufficiently show the kind of information to which his knowledge may lead him. Between what degrees of latitude does Scotland lie? calculate its

length in miles. Between what degrees of longitude? can you tell its breadth in miles from the result? Why not? What country lies between the 9th and 21st degrees of longitude, and the 36th and 44th degrees of latitude? How many times longer from north to south is Russia than Scotland? Compare the number of lines in the map of Scotland with the number which appear on it in the map of Europe or the World. How many miles is Scotland north of the equator, and how does it lie within the temperate zone? Find the distance between Edinburgh and any other place on the same meridian. What is the distance between London and Saragossa, St. Petersburgh and Constantinople, etc.? Are these measurements the same on a small map as on a large one, and how so? Tell the breadth of the continents of Africa and America at the equator. What is their extreme length in miles? Questions may also be put relating to time, thus:—How long does the sun take to come round to the meridian of any place after leaving it? How much time, therefore, corresponds to one degree? What is the difference between Edinburgh and Greenwich time? When it is mid-day at Edinburgh, what o'clock is it at Constantinople, New York, etc.?

"The map serves for all special delineations of the earth's surface; providing for any requisite degree of minuteness, and becoming free from theoretical error in proportion as the scale is enlarged. From maps we best attain the political divisions of the earth, and all those marks which man has impressed on its surface. But the teaching of geography in its larger relations is best effected by the globe; giving us knowledge, not equally supplied by any map, of the great outlines of the world at large. The very ease with which its position can be varied, contributes to this instruction; for here, as in so many other cases, the senses curiously overrule the reason; and by the constant collocation of the same lines under one aspect, the mind gets bound down to a single image, and its comprehension is narrowed or disturbed. To illustrate this, let any one simply turn a globe upside down, and he will find eye and reason both perplexed by the inverted outline thus brought before him. Or, rotating the globe into various unwonted positions, every such change brings fresh and unexpected perceptions to the mind, dislodging errors, or teaching new truths. Thus, if we place the southern pole uppermost, we gain a due conception, not otherwise

obtained, of the vastness of the ocean-surface of the globe; of the singular disproportion of land in the N. and S. Hemispheres; and of the curious pyramidal projection of the African, S. American, Asiatic, and Australian capes into this world of southern waters."[1]

392. Connexion of Geography with Common Life.—This study is one which the teacher has peculiar facilities for investing with interest and reality; for it is one which has an intimate contact with the events of daily life. To avail himself of this, he should use the newspaper to supply illustrations, just as he uses his text-book to supply facts. He will find no illustrations so various and so interesting, because none so life-like. There is not a single issue of any newspaper in the country which he could not turn largely to account. It tells him of events taking place in distant lands in which our well-being or honour is involved; of the development of commerce in countries which have hitherto remained apart from the society of nations; of progress in the arts of peace made by this nation or by that, in this city or in that; of discoveries made in Africa or Australia by the enterprise of travellers, and of voyages into the frozen oceans of the north; of the progress of missionaries in civilizing and Christianizing barbarous tribes; of the railways of his own country, and the establishment of roads or of sea-routes between different countries; even in the dry figures of the market list, he finds articles mentioned from foreign parts, suggestive of instructive remark; and from the lists of shipping he can extract materials, far from uninteresting, for practice to his pupils in determining points of position. No text-book can possibly contain illustrations the use of which infuses so much life into the study of the subject as the daily newspaper.[2]

393. Third Stage—Position of Particular Countries.—When the pupil has time to prosecute the study of geography further, his attention is directed minutely to particular countries in the order of their importance reckoned from his own. And what he learns of these may be reduced to three heads—(1.) Their position, (2.) Their aspect, and (3.) The character of their inhabitants.

The position of any particular country is to be studied both *absolutely* and *relatively*. By *absolute* position is meant its position on the globe, as reckoned by latitudes and longitudes. The lati-

[1] *Edinburgh Review*, No. cxxviii.

[2] Barnard's *American Journal of Education*, No. 20.

tude of its northern and southern extremities is observed, and from the results its length in miles is calculated; then the longitude of its eastern and western extremities, and from these results an approximation is made to its breadth in miles. If from the joint result any approximation can be made to its area, the pupil should be shown how to make this, and what is the meaning of the new result: but whilst he makes such calculations on his slate, he should only be asked to remember its area in terms of some unit of measurement assumed as a standard, *e.g.*, his own country. By the *relative* position of the country is meant its bearings from the countries and seas which surround it. The boundary line should be traced; its character observed, whether it be inland or sea-coast, and what proportion of each; if inland, whether it is marked by hills, rivers, etc., or whether it is entirely artificial; if sea-coast, how it is bent by bays or creeks; what are the seas and countries that adjoin it in the several directions; and how other important countries lie from it, though not immediately adjacent. So that, in fact, though the eye is directed to but one country on the map, there is present to the mind of the observer an image of the surrounding ones also. Besides the absolute and relative position of the country as a whole, its configuration must be studied; for which purpose there is no plan nearly so effectual as map-drawing. The pupil should have his slate or paper ruled with the lines of latitude and longitude (he may construct these for himself after some practice); he should observe the position of the salient points of its boundary line in his hand-atlas, transfer these to his copy, and then join the points amongst themselves, in the first instance, without attempting great accuracy, but tracing the bend of the boundary with more exactness in subsequent attempts.

When the various countries have been examined and compared in respect of their position, there will remain upon the mind a well-defined impression of the zones into which the surface of the globe has been divided; without which all the knowledge subsequently acquired must be vague and unsatisfactory; as much so as would a knowledge of history without any regard to chronology. Such a knowledge of position is the basis on which alone physical geography can be studied, since on position depends climate, and on climate the productions of the soil and the pursuits of the inhabitants; and it alone will enable us to follow the narrative of events which we meet in course of reading or conversation.

Considering its importance, then, it certainly does not in general receive the attention to which it is entitled.[1]

394. Aspect of Particular Countries—Physical Divisions.—The first object of the teacher in describing the aspect of a country should be to distinguish its great natural divisions. He may determine these for himself from the map, by tracing the river systems, or the mountain ranges, or the extensive plains. He will find them to consist of three principal kinds, the basin of a large river (*e.g.*, the Ebro), the slope between a range of mountains near the sea and the sea itself, down which flow many smaller rivers generally parallel (*e.g.*, Valencia and Murcia), and the lofty table-land (*e.g.*, the centre of Spain). And these should be described as they actually appear to the eye of the spectator. A country may have so many mountain-ranges and large rivers: it is not on the possession of these simply that its aspect depends, but on the manner in which they are connected with each other. If the mountains be separated from the rivers, and each learnt by themselves, the idea of a natural division is lost sight of. Numerical classification of the features of a country may be useful for revisal and cross-examination, but is not the principle to be followed in geographical description. The teacher must take one natural division at a time, and give a bird's-eye view of it; this implies that the river shall be noticed in connexion with the mountain from which, and the plain through which, it flows, and that the surface shall be described generally as hilly or flat, as pastoral or agricultural, as fertile or barren, and the like. These divisions should be taken in their order, till the country is exhausted.

395. Political Divisions and Towns.—The political divisions should be taken after, not before, the physical: being conventional and liable to change. They are sometimes determined by the physical, and sometimes contradict them; the coincidence or the want of coincidence will alike aid the pupil in remembering them. It follows that they should be grouped for the purposes of teaching according to the order of the physical divisions.

Towns should be classified according to the rivers on which they stand. Following the order of the physical divisions, let the teacher trace the rivers and their tributaries down, naming the towns as they occur on the banks, and observing at the same time the political divisions in which they lie. When this has

[1] *Quarterly Journal of Education*, No. xi.

been done, few towns of any importance will have been omitted; people building their towns upon rivers for obvious reasons, when they can. Those that remain may be classed as sea-coast towns and as inland towns. The most important towns alone should be noticed; and great judgment is required in selecting from the mass of details the information to be communicated in connexion with them. In addition to the position, their site and appearance should be noticed where these are remarkable, and their size. Any other facts which should be taught are such as relate to their industry or their history.

396. **Character of the People.**—This is a very wide subject, and falls only partially within the scope of the geography-lesson. The moral, political, and social character of a nation depends far more on moral causes, which it belongs to history to investigate, than on material, which are the special province of geography; and in so far as material causes have influence, their action is subject to so many conditions and limitations that it can with difficulty be estimated even by mature minds. In teaching geography, therefore, national character should be stated as fact, and only traced to its causes in those cases where the connexion is obvious enough to force itself on our notice: as when we associate the mountain with a love of freedom and independence; or when we attribute to the plain the steadiness and dulness, or even the effeminacy, of the people who dwell in it; or charge the rigours of the north with the stunted growth both of body and mind which marks the tribes of the Arctic zone. The aspect of national character which is properly embraced in the study of geography is the industrial, as being directly influenced by the productions of the soil. This is level to the capacity of the pupil, and capable of affording him much interesting mental exercise. The object of the teacher here is to explain the importance of a town or district, by noticing its industry, and pointing out the circumstances which have led to its peculiar development, where these are not accidental; which they are not in the case of important manufacturing and commercial places. More particularly, what he has to consider may shortly be described as being, the manner in which any country sustains itself, the degree in which it contributes to the sustenance of others, and how it comes to make the particular contribution which it does. To take but one example, that of our own country: he is led to notice its parti-

cular branches of industry and the circumstances on which these depend. It is pre-eminently a manufacturing country, because it is largely possessed of the elements required for manufacturing on a grand scale, extensive fields of coal as in Northumberland, Durham, Staffordshire, and iron fields as in Wales, Staffordshire, Clydesdale: these are the materials which nature has presented to the active genius of its people. The possession of these minerals is the basis on which rests the manufacturing industry of our Manchesters, Birminghams, Sheffields, and Glasgows. Then he is led to consider how the results of this industry are disposed of: the necessity of an outlet and the character of the sea-board of the country are the considerations which explain the extent of its commercial engagements, and the wealth and population of our Londons, Liverpools, Bristols, Hulls, Glasgows, and Dundees. These commercial cities are not the growth of accident any more than those already noticed; but have become what they are under the influence of clearly discernible causes. Finally, the conditions of this industry are partly dependent on materials obtained from abroad, such as cotton; whilst the results of it must bring to us in exchange those commodities which we need but do not find at home, chiefly articles of food and luxury, as tea, sugar, and wine. Thus the importance of our sea-ports as outlets is enhanced by their importance as inlets.

By geographical study pursued in this way, all the departments of our industrial life are understood in their organic connexion; and, so far as time allows, the mutual dependence of all the departments of the industry of man.[1]

397. The Mode of using Maps.—The teacher should extract from the map for himself all the information he can; and if he know how to use it, this will not be small. Of course he must refer to the book for certain kinds of facts; but, as a rule, he should refer to it mainly to confirm and supplement the conclusions which he draws from the map. "So far from being looked on as aids to books, the books should be considered as explanatory of them. To learn by heart a book of geography, without having an accurate knowledge of the maps, is not a whit more sensible than learning by heart the catalogue of pictures in an exhibition, without ever having gone to see them. 'Study the map' is a

[1] Pillans' *Rationale of School-Discipline*, chap. viii.; also of *Physical and Classical Geography*; Arnold's *Lectures on Modern History*, Lecture .

rule of the very highest value in teaching geography." The teacher cannot teach this subject to much purpose unless his information be accurate and well-impressed, so far as it goes; and it will have this character, if acquired in this way. The patient observation, the exact measurement, the definite calculation, and the cautious judgment which are required to put him in possession of it at all, will stamp it firmly on his mind; whilst he will attach greater interest to it from the exertion it has cost him and the thoroughness with which he has it, and will consequently teach it with greater power. It may be added, that if the habit of studying the maps is good for the teacher, it is no less so for the pupil.

The vast importance of good maps in teaching and studying this subject has not been sufficiently felt in this country; else our maps would have been more judiciously designed. The best English school-maps are those of Hughes, Stanford, and Johnston; but they are not in all respects equal to those of Sydow, of which an English edition has been issued, and is on the 'list of books' formerly printed by the Committee of Council as suitable for schools.

398. Map-Drawing.—The teaching of geography will be greatly more effective if, instead of being purely demonstrative, it have recourse to constructive exercises on the part both of teacher and pupils. Their value in impressing the position and outline of a country on the mind has already been noticed; they are of no less service in impressing the aspect of it. With what effect they may be used by the teacher will appear from the following extract:—"The teacher," says Mr. Mann of a lesson which he witnessed in a Prussian school, "stood by the black-board with the chalk in his hand. After casting his eye over the class to see that all were ready, he struck at the middle of the board; with a rapidity of hand which my eye could hardly follow, he made a series of those short divergent lines or shadings employed by map-engravers to represent a chain of mountains. He had scarcely turned an angle or shot off a spur, when the scholars began to cry out 'Carpathian Mountains, Hungary,' 'Black Forest Mountains, Wurtemberg,' 'Giant's Mountains, Silesia,' 'Central Mountains, Bohemia,' etc. In less than a minute the ridge of that grand central elevation, which separates the waters that flow north-west into the German Ocean from those that flow north into the Baltic and south-west into the Black Sea, was presented to view, executed almost as beautifully as an engraving. A dozen

wrinkled strokes soon represented the head waters of the great rivers which flow in different directions from that mountainous range ; while the children, almost as eager and excited as though they had actually seen the torrents dashing down the mountain-side, cried out 'Danube, Elbe, Vistula, Oder,' etc. The next moment I heard a succession of small strokes or taps, and hardly had my eye time to discern a large number of dots made along the margins of the rivers, when the shout of 'Linz, Vienna, Prague, Dresden, Berlin,' etc., struck my ear. With a few more flourishes the rivers flowed onwards towards their several terminations, and by another succession of dots new cities sprang up on their banks."[1] The impressiveness of such a lesson depends on the map being constructed in presence of the pupils, and, as it were, with their help ; little or nothing would be gained were the teacher to draw the map privately beforehand and present it to them complete. The maps of a country which the pupils are required to construct should not be finished in a single effort. It should grow with their advancing knowledge of the country, and should represent no more at any time than they know of it : otherwise the exercise becomes purely a mechanical act of copying, and fails of its object. One division should be filled in at a time, with mountain, river, and town ; then another and another, till the whole country appears in the representation ; the progress of the map being kept in strict accordance with the progress of the instruction. The same conditions, it need hardly be observed, are not binding during revisal of knowledge ; the pupil may then be required to sketch the whole country from memory.

399. Historical Geography.—From the close relation which exists between geography and history, they should be taught in illustration of each other. In teaching history, constant reference should be made to the map ; in teaching geography, constant reference should be made to the historical associations of places. It is important to preserve this connexion, both in the case of foreign countries and in that of our own ; though in the several degrees of its importance.

The history of foreign countries cannot be studied systematically in the common-school : whatever knowledge of it is acquired, therefore, must be got incidentally (§ 419). The pupil's studies in geography afford the opportunity of noticing salient points

[1] Mann's *Educational Tour.*

in general history. But the mass of facts which might be communicated is so great, that much judgment is required in making a selection. A practical limit may be found if the teacher communicate only those of which his pupils can be made to perceive the significance. Thus Mayence is interesting as the scene of the labours of Guttenberg, the first printer; this is a fact which may be early associated with the place, from the ease with which its importance may be felt. The gulf of Lepanto was the scene of an important naval battle in 1571, but its peculiarities and momentous results are less easily realized; and still less easily, the importance of associating the birth of Copernicus, the astronomer, with Thorn. If only the teacher limit himself to those historical facts which are level to the comprehension of his class, he will find this department of the study of geography most profitable and interesting. It may be added that, within certain limits, contemporary history should be associated with the geography-lesson in the same way, taking the newspapers as the sources of information; the pupils have so many points of contact with the current stream of knowledge, that this kind of information takes a strong hold of their minds. Besides, it accustoms them to an intelligent way of reading the narratives which form so large a part of periodical literature.

The historical associations of places in their own country may be referred to with greater profusion for two reasons:—a minuter knowledge of the scenes in which we are daily moving or of which we daily read is expedient; and less time is occupied in the explanations, from the amount of knowledge regarding the history of their own country, which the pupils may be supposed to have acquired from their historical text-book. The associations in this case are made rather for the sake of impressing and testing than of communicating fresh information.

Finally, there is what may be called the *incidental* teaching of geography. In many of the lessons given in school there are allusions to places; these should be illustrated by actual reference to the map. This is not only needful for the full understanding of the lesson in hand; it teaches the pupil to use his geographical knowledge for casual purposes, just as he will afterwards have to use it in course of his reading. But this illustration must by no means be carried too far into the narrow and unimportant by-paths of geographical details.

CHAPTER X.

THE OBJECT-LESSON.

400. Design of the Object-Lesson.—The phrase 'oral instruction' is one which, according as it is understood, may apply either to the whole instruction given in school, or to one particular department of instruction. Text-books present the pupil with materials for study, and he is required to exert himself upon them in the preparation of prescribed tasks. But he cannot be said to study them for himself in any adequate sense of that word: he may learn off what he understands, or, it may be, what he does not understand, but this does not constitute study. It is by the teacher's explanations and examination that he studies, or receives an intelligence of, the several subjects. In every single branch these are necessary: so that in every single branch he is dependent on 'oral instruction.' But this phrase is often applied, in a narrower sense, to those lessons in general knowledge in which the pupil is indebted to his master for both the materials and the process of study. The instruction of the younger children, who have not in any appreciable degree the faculty necessary to study from book, is almost entirely of this nature, whether in the instrumentary branches, or in the reception of that knowledge of the things about them by which their first intelligence is awakened. Of the instrumentary branches we have already spoken: it remains to notice oral instruction in 'things,' or, as it has been commonly called, the 'Object-Lesson.'[1]

The materials for this instruction are drawn from all the departments of natural science in which children feel any interest: including animals, plants, and minerals of various kinds, whether found at home or abroad; the heavenly bodies and the phenomena of climate; the features of the landscape in every region of the world; the structure of the body and the conditions of its health; the processes of art and manufacture car-

[1] The 'Object-Lesson,' as indicated in the text, plays a larger part in the instruction of younger pupils than of advanced. Having therefore spoken of it at length in 'Early and Infant School-Education,' we shall not here enter into detail.

ried on around them ; the nature and uses of the articles which they see in their own homes. It is not necessary or expedient to confine their attention to objects which lie within the sphere of their observation ; for they have imagination as well as observation ; and all the things of foreign lands, wonderful animals, plants, and scenery, which admit of being illustrated by things of the same kind at home, are 'familiar' things for the purposes of this instruction.

The general design of the object-lesson is to educate the child's intelligence and to promote his acquisition of language.

It has already been fully explained (§ 80), that the first mental activity excited in the child is in connexion with things, and that the channel through which it is exercised is the senses. The first principle in intellectual elementary education is to engage him with 'things,' to give him notions and words by reference to what is concrete, and not to ask his attention to what is abstract: for such exercise alone has he any inclination and any ability. One design of the object-lesson has therefore been stated as being to give strength and vivacity to his perceptive intelligence.

The other design, which is not so much different from, as a necessary complement of, the former, is to extend his knowledge of language. Words are not acquired by the child through processes of definition or explanation ; they come as signs of the results which he attains by the exercise of his own perceptive intelligence. If we reflect on the extremely intimate knowledge of the meanings of words which is necessary to their use as the instrument of thought, we shall see that language could never become sufficiently fixed and familiar to him except by this constant process of verification. It is the thoroughness with which he performs this process, by which we explain the firm hold which he has over that part of language which is characteristically his 'mother-tongue,' in comparison with that which he obtains over the language of books acquired in school ; the one he proves and tempers for himself by the exercise of his own perception, the other he receives too much by way of definition ; the one has therefore a living power for him, of which he is conscious almost as much as he is of his own existence, the other he recognises dimly in shadowy and uncertain outlines, from his having never grasped it and felt its real utility. The object-lesson, on its linguistic side, is designed,

by continuing in school that process of familiar conversation about things which is the method of early family education, to extend and deepen the child's knowledge of his mother-tongue, and, by application of the same process, to enable him to make incursions into the domain of book-language with the view, as it were, of personally exploring its vocabulary.

There are two other considerations which remain to be mentioned in an estimate of the purposes served by this kind of instruction. Whilst it derives its main importance from its being the necessary instrument for the development of the child's intelligence and language, the systematic and judicious use of it will result in giving him a certain habit or complexion of mind which will be productive of eminent advantage, long after he has passed on from the special cultivation of the conceptive faculty to the sphere of judgment and reasoning. From the frequent contact with things which it implies, he will have acquired a familiarity with them, and a taste for them, which will qualify him for the more effective exercise of these higher powers, in respect not only of the actual knowledge which he possesses, but of the resources of illustration which it puts at his command. Apart from such materials and aids, however accurately he may be able to conduct processes of formal reasoning, they will be wanting in force and in practical influence.—The other consideration is this: that whilst it is no part of the design of the object-lesson to impart moral instruction, its moral aspects present themselves so obviously, that they should be diligently, though prudently, turned to account. A pupil who has his attention habitually directed to the striking and various adaptations which exist in nature, should acquire a feeling of reverence for the power, wisdom, and goodness from which they have proceeded. For this purpose it is not necessary that moral reflections should be indiscriminately, or even always explicitly, embodied in language; the chief thing required is the existence of such a feeling on the part of the teacher as will give a moral tone to the instruction, and make use of the occasions on which they obviously present themselves.

401. **Knowledge of 'Common Things.'**—But the object-lesson has an instructive as well as an educative aspect; namely, to give the child that knowledge which, as an intelligent agent, he ought to have of the things about him. Viewed under this aspect,

experience has shown that it has largely failed of its purpose. The teacher, particularly if his own education has moulded him to formal studies, and has not accustomed him to the study of nature, is very apt to occupy the lesson with words, instead of things. He takes the most familiar properties of things, which the pupil observes the moment his attention is directed to them, or of which he is perhaps already cognizant, wraps these up in difficult, it may be technical, terms, and then gives back to the child what he already knows, but disguised in such a form that he does not recognise it; instead of assuming, or touching slightly, on these properties, and passing on to give information which would be useful to him, and which he cannot gather for himself. An object-lesson which does little or nothing more than this, is not a lesson on things at all, but on words. It is to counteract this tendency that the phrase, 'instruction in common things,' has been so much of late applied to the object-lesson; a phrase which would never have been heard of, had that lesson, so familiar under its old name, been felt to have generally fulfilled its design. It does not, or at least should not, mean a different kind of instruction from that given in the object-lesson, but simply the object-lesson, with due prominence given to its 'instructive' aspect. If it meant anything more than this, it could have no claim on the attention of the teacher. It is of so vital importance to the utility of the object-lesson to preserve its real character, that the following extract is subjoined, in illustration of the fault complained of and the remedy required :—

"A teacher proposing," says Mr. Moseley, "to give an oral lesson on coal, for instance, holds a piece of it up before his class, and having secured their attention, he probably asks them to which kingdom it belongs, animal, vegetable, or mineral—a question in no case of much importance, and to be answered, in the case of coal, doubtfully. Having, however, extracted that answer which he intended to get from the children, he induces them by many ingenious devices, much circumlocution, and an extravagant expenditure of the time of the school, to say that it is a *solid*, that it is *heavy*, that it is *opaque*, that it is *black*, that it is *friable*, and that it is *combustible*. And then the time has probably expired, and the lesson on the science of common things, assumed to be so useful to a child, is completed. In such a lesson the teacher affords evidence of no other knowledge of the particular thing which was the subject of it, than the children might be supposed to possess before the lesson began. He gives it easily, because the form is the same for

every lesson; the blanks having only to be differently filled up every time it is repeated. All that it is adapted for is to teach them the meanings of some unusual words, words useless to them, because they apply to abstract ideas, and which, as the type of all such lessons is the same, he has probably often taught before. He has shown some knowledge of words, but none of *things*. Of the particular thing called coal, as distinguished from any other thing, he knows nothing more than the child; but only of certain properties common to it and almost everything else, and of certain words, useless to poor children, which describe these properties. Coal is a *common thing* to the child, one with which its daily observation is familiar, intimately connected with uses of its life—a substance about which it might be taught many things which would probably be of great use to it in after life—things which it would not be likely ever to know, unless it were so taught them. But they are not these things; and if the science of common things is to be so taught as to be of any use to the child, it must not be this science. This tendency, from ignorance of *things*, to teach children *words* only, runs in a notable manner through almost all of the lessons on physical science which I have listened to."[1]

We have already stated that part of the design of the object-lesson is to extend the child's knowledge of language. The passage just quoted, therefore, is to be understood as directed not against the legitimate use of it for this purpose, but against that abuse by which it is made to teach words *and nothing more*. The qualities of objects are to be observed as being necessary to a conception of the object; and they are to be expressed in appropriate terms; but if the terms selected are manifestly beyond the power of the class to use, and are not such as will ever take rank amongst the common vocabulary of their conversation, or be met with in the books they are likely to read, the process of instruction is purely verbal, and, as such, useless for the purposes of the instruction. The idea is the same whether we say that coal is *combustible* or that *it burns*, that sponge is *absorbent* or that it *sucks in water*, that salt *is of a bitter taste* or that it is *saline;* an advanced class may perhaps be able to use the technical terms in virtue of its advancement, but to a young class they are sounds and nothing else. They conceal, instead of expressing, the ideas which they respectively denote. In selecting the terms in the object-lesson, we must follow the rule which applies to the use of language in general, viz., that it must be adapted to that stage of intelligence and of language which the pupil has reached.

[1] *Min. Counc.*, 1853-4.

To preserve the real character of the object-lesson, the teacher should not bring forward those qualities of bodies which are universal or nearly so, but keep to those which are peculiar to the object, and in virtue of which, therefore, it is adapted to the uses to which it is turned; he should not regard himself as bound in all cases to express these in the technical 'adjective' epithets which would be applied to them in scientific description, but should choose such terms as he may reasonably hope to make part of the pupil's vocabulary; and he should remember that the naming of qualities does not come up to the full idea of the object-lesson, but that those facts also should be communicated which constitute the current useful and interesting knowledge of the object.

402. Method of the Object-Lesson.—The following is an outline of the process of conducting this instruction :—

The object should be exhibited, if it be a substance (such as glass or sugar), for the inspection of the class; and the qualities important to be noticed should be observed by the appropriate senses. The action of the several senses is not to be interchanged: thus, a quality cognizable by touch alone, such as hardness, is not to be vouched for by the sight, but verified by the sense of touch. The actual inspection of the aggregate of the qualities must be so distributed over the class, that as little shall be taken by them on trust as possible.

When any quality is verified, the term which expresses it is to be noted, by the class if they may be supposed to know it, by the teacher if not. It should be carefully repeated by one or more pupils, or by the whole, that they may become familiar with its sound; then it should be spelt and set down on the board, or, if it be a strange word, set down on the board first and spelt afterwards, so that its form may become familiar. In this way the three aspects under which every word should be regarded are taught; the understanding, the ear, and the eye are exercised respectively on its meaning, its sound, and its form; failing any one of these, the word cannot be thoroughly learnt.

When the qualities have been disposed of, the next part of the lesson is taken up in the same spirit. If it be the 'uses' of the object, the principal of these only are to be noticed; the lesson should not be encumbered by the mention of such as are rare and technical, or generally by such as the children are never likely to

hear about. The leading points of instruction should be set down on the board as before, and terms similarly handled, but with great care not to consume time unduly in the writing down. The preceding part of the lesson upon the qualities of the object ought to throw light on this part: if the several parts stand unconnected, the exposition is essentially wanting in unity and in intelligence in the wider sense of that word.

If the lesson have any other part, such as 'on the preparation of the substance,' it must be treated in the same way; but if its introduction would crowd the lesson, it should be allowed to stand over for future exposition.

When the instruction is ended, the black-board should exhibit precisely the track that has been followed. The teacher should accordingly use the outline of the lesson which it presents to aid the recapitulation, requiring the children to express themselves, by its help, as much as possible in complete sentences. Facility and neatness in board-writing are great helps in giving this instruction; and the teacher should have in his mind a definite scheme for noting down the heads of each lesson before he commences.

If the lesson be upon an animal, the above succession of parts must of course be modified to suit the nature of the case: in whatever order they may be taken, they will be the 'structure,' 'habits,' and 'uses.' The mode of handling the two last is sufficiently indicated by what has already been said. In treating of the 'structure,' the several points should be noticed according to their importance and their organic connexion, and in every case some notion of the size and appearance of the animal as a whole should precede a description of particular parts, so that the pupils may have an outline to which they may refer these details. A connexion analogous to what was mentioned as existing between the 'qualities' and 'uses' of a substance exists between the 'structure' and 'habits' of an animal, and should have the same stress laid upon it in teaching. The black-board should be used in the manner already explained. The pictorial illustration, without which such a lesson cannot be given with advantage—except on the animals which the children daily see, and which are, therefore, in a certain sense, present whilst the lesson is given—should be presented, not at the beginning of the lesson, but after the

description has been given, so that they may first form an ideal for themselves, and then compare that with the reality.

A certain succession of parts in the lesson has here been assumed; simply to illustrate the manner of giving any such lesson, and not as meaning that the plan is the one to be followed in all cases. It has already been sufficiently explained that there is no stereotyped plan for an object-lesson or any other lesson; but that the teacher should, by following certain principles, select that plan which seems to him best suited for the exposition of the lesson in hand. (§ 241.)

It is not possible that any scientific order, and it is not important even that any systematic order, should be followed in arranging the series of object-lessons. If the teacher observes the general rule of presenting to his pupils what falls under their notice before speaking to them of what does not, he may follow the order suggested by the interest which they are likely to feel in the several subjects of lesson. The mental discipline which is the primary design of this elementary 'thing-instruction' is obtained within the limits of the single lesson. The higher discipline into which it initiates them, that, namely, which results from the comparison of different objects with a view to classification, does not at all require a series of lessons of the same kind, for instance on animals, or on minerals, to be given consecutively; variety should therefore be preferred, because of the greater freshness and interest attaching to it.

With advanced classes instruction is often given in particular subjects, as in mechanics or astronomy, or the like, *in the manner of the object-lesson;* in which case it is evidently requisite to proceed *in series.* This kind of instruction, though it falls under the general head of oral instruction, does not hold the same position in school-work as the object-lesson; its design is not the same, neither therefore is its method. The course and spirit of the 'thing-instruction' proper to be given in the common-school, whether by lessons purely oral, or by oral explanation of reading-lessons, is fully exhibited in the Dean of Hereford's *Suggestive Hints on Secular Instruction.*

There is a common error in the framing of object-lessons which must be specially mentioned, as it goes to vitiate any mental discipline which may result from the entire instruction;—"the

neglect to distinguish the different stages in the advancement of the children to whom they are given. Any infant of four years is a very different being intellectually from a child of six or seven; and can only, to a small extent, follow the same lesson. Even in dealing with things, we shall not secure the child's attention unless we select things which interest him, and present him with notions suitable to his capacity. Perhaps we may distinguish three stages of the object-lesson. In the first, the pupil is required to discriminate objects by their names, to notice their simplest and most obvious properties, such as form, size, and colour, and to tell their parts; in the second, we should deal chiefly with the qualities and uses of things; and in the third, with a *more formal* statement of the various relations in which these stand to each other, such as of resemblance and causality. These three stages may correspond approximately to the first year of attendance at school, the second year, and the third year."[1]

403. Examples of Object-Lessons.—

1. A BELL.—*Lesson for Young Class.*

INTRODUCTION—

Children at play—different games *in the play-ground.*—They hear a clear ringing sound, and *they all stop*—what is the sound?—what for?

QUALITIES—

Heard the school-bell often—kind of sound—*loud—clear—pleasant* or *musical*—Seen a bell? Shape?—*something like a cup or thimble, but bigger—curved—smooth outside* and *inside*—look inside, what do you see? *Tongue* or *clapper*—What for?—*handle*, what *made* of? (Get parts named and process of *ringing* now *described* by class.)

What made of?—*metal*—curious kind of metal, which you will learn about by-and-bye—would glass or earthenware do?

USES—

To let us know when *to go to school—to church—people* to go *to work—into carriages* at the railway-station—to let us know what *o'clock* it is—*large* bells for these purposes. (All got from class.)

To let people know we *want to get into the house*—to let the

[1] *Early and Infant School-Education*, Part II. chap. iii.

servant know we wish to see her—*door-bell* and *house-bells*—house-bells *hung up on walls*—sometimes *lying on the table*, *hand*-bell—*small* bells for these purposes. (All got from class.)

2. The Eye.—*Lesson for Young Class.*

Introduction—

We work with our *hands* and *arms*—but could not work with these without *seeing* what to do—what do we see with?—how many *eyes*?—right and left (class point to each).

Position and Shape—

Where placed?—*high up* and in *front*, to *see as much as possible*—just above the *cheek*, and below the *forehead or brow*—eye, shaped *like a ball*, *round*, *soft*, *and tender*—moves about, *so as to see around* us.

Parts—

Eyeball—*different colours*—*white* of the eye—the coloured ring, *greyish or bluish*—dark little spot *in centre*, like a *mirror* if you look at it—this is the part that sees.

When we sleep, eye covered up *to keep out light*, *eyelid*—this used also *to keep out dust*—what is on the edge of the lid?—*fine hair*, use of this, called *eye-lashes*—eye very soft, and *liable to be hurt*—how protected—set in a hollow cup of bone (*make them feel it*) which projects beyond the eye, so that if we fall *the eye is not hurt*—on the edge of bone above the eye is a *fringe of hair to keep off sweat and dust*, called *eye-brows*.

Conclusion—

Eye given to *notice things*—use your eyes wherever you are—*to get knowledge* of what is about you—*animals*—*flowers*—*lessons* too.

With a more advanced class, there would be a further use of terms for the parts of the eye, such as *iris*, *pupil*, *socket*, etc.—further illustration would be given of the several parts—and certain points of its economy would be noticed, such as the use of tears, which are here passed by.

3. Lead.—*Class more advanced.*

Introduction—

Notice the water-pipes round the eaves of the houses—what are *they made* of?

Qualities—

Colour. See this piece of lead—describe its colour—*blue? grey? dull*—a dull bluish-grey colour—a colour of its own, so we speak of things having a *leaden colour*.

Heavy. Take it into your hand? how does it feel?—*heavy*—carry

much of it?—*few bars* make a load for a horse—so we say of very heavy things, that they are *as heavy as lead.*

Soft. Here is a pin, try to mark on the lead—it leaves *a mark*—try to mark iron, *cannot*—lead, therefore, is *soft—softer than iron and other metals*—shape of this piece of lead—if beat with a hammer—*flattened*—see sheets of lead lying at door of plumbers' shops, all rolled up—like paper—how made? sometimes say that lead is *malleable.*

Melts. Seen a little fire on a grate in the street sometimes, *men working*—what are they? *plumbers?* what do they work with? —*lead—pot on the fire*, what do they put into it? *bits of lead*, what becomes of these?—*melted down* so that they would run *like water*—away from the fire again it *becomes hard*, in *any shape we like*—we say that lead *melts* or *fuses*—books tell us that it is *fusible.*

Does not rust. Picked up an old nail, perhaps, from road—what like is it?—*rusty*—what *makes this—other examples of this?—iron* rusts *from water*—does lead?

Uses—

(1.) For houses—*pipes* and *cisterns*—why useful for these? —because *soft*, and *can be hammered out* and *rolled*—also because it *does not rust.*

(2.) What does the sportsman use to shoot with?—*bullets, big and small*—what makes lead useful for this purpose?—because *heavy*, and can be *melted* into *round* or *oval shape.*

(3.) Seen plumber or smith fastening up iron-railings, perhaps in a stone dyke?—how he fastens them—*class describe process*—what does he pour in at bottom?—*melted lead* or *solder*—why useful for this?—because can *be melted* into *any shape* and then *become solid again.*

Conclusion—

Recapitulate from black-board; which should contain the following outline of what has been said:—

Lead.

Qualities.	Uses.
Bluish-grey or leaden colour,	1. *For houses*—pipes, cisterns, etc.
heavy,	2. *For shooting*—bullets.
soft,	3. *For fastening iron bars*—solder.
can be beaten out,	
(with advanced class, malleable)	
melts over fire,	
(with advanced class, fusible)	
does not rust.	

4. Stork.

[? after word or sentence means that it must be got from pupils].

Introduction—

Suppose we were to go together to a country called Holland not very far from this—find it full of *canals*—roads on canal banks—see strange-looking bird, with long legs, neck, and bill, walking about by canals, picking up its food—not afraid of you—when going along streets too, see same bird there—walking on pavement, erect and tall—nobody hurting it or driving it away—if you did, police would notice you at once—by-and-bye you will see it stretch its long wings and fly to roof of house with long legs hanging in air—would like to see that bird—Our lesson is to be upon it.

[Write name on board.]

I. Appearance and Structure—

Height. Compare it with height of boy—or anything in room (unnecessary to tell number of feet high unless with advanced class).

Legs. Half of its whole height—long?—slender?—strong?—why long?—what that shows—*wade* in water—not *swim* like duck—get examples from what seen in museums, etc.—as heron.

Neck. Long—why?—for same reason as legs long—if wading in water, neck long to pick up anything—*e.g.*, *swan*, *duck* (from the class).

Bill. Long—for same reason (from class).

Body. Size—indicated by hand, or anything in room—compare body with legs and neck—its colour.

Wings. Large—why?—to carry heavy body, etc.—stretch of wings great, illustrate by hands stretched—appearance when flying—where its legs?—hang like pointers or pendulums in air (if the class knows of wild ducks, speak of them).

Appearance. Walks tall—slow—seems wise—stately—would not hurt any one—show picture of stork.

II. Habits, etc.—

Nest. Where live?—must have a home—where did the stork fly to from street?—to roof—if watched, seen to fly to a large box—nest there—if we were looking down on roofs we should see a box on every house—why?—men won't live in house unless stork on top—think it unlucky—place box for them?—size.

Food. We saw it walking by canal banks—what seeking?—worms, etc.—in walking along hear croak of frogs on every side—thousands—storks eat them—if many storks, vast numbers must be killed—in streets eat refuse—so that they serve as scavengers?

Care of Young. The folks you lived with there would take you to roof to see?—nest of stork—if you came upon a bird in country, it would fly away—the stork would not—quite tame—let you near—see into its nest?—eggs—little birds—long legs—kind to young—love them much—bring worms, etc.—story of house on fire—young storks in nest, unable to fly, mother spreads wings over them, and destroyed with them in burning mass!—At last they grow big and can fly.

Migration. If in Holland in winter, you would see no storks—where does any bird that leaves us for the winter go to?—to warm country—so storks—gather together like swallows?—set off in flocks—strange appearance with pole-like legs, etc.—found in India, Egypt, etc.—story of man who put ring on stork's neck telling that it came from Holland—next year it brought back another ring telling that it had been in *India!*

III. Uses.—

Why are people there so kind to it?—punish all who hurt it?—place nests for it?—surely very valuable?—(class give reasons).

Destroys Worms, etc. Land plagued with frogs, worms, etc.—stork devours them—many storks—so that many destroyed—if not, the land would be overrun—storks very valuable.

Preserves Dikes. Land, lower than sea, which is kept out by *dikes*—canals also kept in by dikes—some stone, some earth—if they should break?—land has often been flooded, etc.—men watch them—worms eat through the dikes, and water may come—but stork eat them?—so that he takes care of the dikes?—therefore valued by Dutchmen—they could not want the stork.

What do you think of it?

Recapitulate.—By taking walk in Holland, and noting what they see of the stork, taking the points as they suggest themselves (by aid of black-board).

CHAPTER XI.

SINGING.

404. On Capacity for Singing.—Singing is as natural to man as speaking; and, for any reason that appears to the contrary, it should be as universal. The parent speaks to the child, and the child speaks after the pattern thus given him: both act upon instinct: the parent sings to the child, and the child learns to sing to itself by imitation; in this, too, both follow their instincts. In childhood, speech, as the intelligent utterance of thought and emotion, and song, as giving intensity to the utterance of the emotions, are alike common. This fact suggests two important considerations; the one bearing on the capacity of the child or the adult to learn singing, and the other suggesting the method by which it is to be acquired.

If singing is almost universally practised by the infant, it may be in the same degree universally retained by the youth and the adult. There is but one way in which the acquirement then made can be lost, and that is by neglect. But even if it be thus lost, it may be recovered. Granting that a thorough familiarity with singing is best acquired when it has been practised from infancy upwards so as to become a habit, nature does not withdraw the gift permanently from those who have set no value on it on emerging from infancy, or who have not had the habit formed by their early instructors. The teacher should disregard at once the delusive maxim so often applied to any one who does not sing that he 'has no ear,' in other words, that he has no taste or capacity for singing. He should rather assume that there is an 'ear,' and that the object of his instruction is to make it conscious of its power. It is matter of experience that children, of whatever age, almost without exception and without much difficulty, attain to the perception of 'tune.' And the adult, the teacher for instance who may wish to acquire it, may acquire it if he will: all may do so, except those who have some organic defect. The difficulty will be considerable, more or less according to the completeness or length of time with which he has allowed his capacity to remain dormant; just as it would be, if he had to acquire his power of language at

a mature age. But he may acquire it, and, what is more, he can judge for himself whether he may or not; if he can distinguish that one note differs from another in pitch and length, he has musical capacity, sufficient, to say the least, for all his purposes. Whatever the difficulty of the acquisition is, we are certain that it is, in the great majority of cases, very much less than it is supposed to be before the effort is put forth. These remarks are made both to guard the teacher against hastily excluding any of his pupils from musical cultivation, and to encourage him, where he feels the necessity and desire, not to despair of his own.

Singing, like language and number, is naturally acquired in infancy by imitation. The child learns to speak before he learns to read, the sounds and use of words before their forms; and he learns the value and the names of the numbers before their signs, numeration before notation. So he learns the utterance of musical sounds, and the purpose served by it, before he has any concern with musical notation. It is a universal rule of elementary instruction, that the thing signified should be known before its sign, the reality before the formula. If this course is followed in singing, the child will feel his subsequent instruction in notation to be real and substantial, and to be interesting, because offering him a further acquaintance with that which he already feels to be interesting. Musical instruction which reverses that order can be neither intelligent nor interesting; indeed it is not a process of instruction at all; and the results to which it leads are of precisely the same nature and value as we might attribute to a knowledge of the forms of words without their meanings, or of the names of the numerical symbols without their significance.

405. Early Instruction in Singing.—In dealing with the youngest children, the teacher must teach singing, just as the parent does, by giving them suitable models, and requiring them to imitate these; in other words, through the ear alone and not from note. By a suitable model is meant one which is suitable in respect both of its subject-matter and of its music. A child's song should refer to those things which he likes to talk of and engage himself with: natural objects and stories from the life of man or of animals. A song is not meant to give instruction in facts; and therefore arithmetical, geographical, and historical rhymes should be avoided. Its words, moreover, should be correct and judicious,

its morality undoubted though unobtrusive, its poetic sentiments striking and beautiful enough to catch the youthful fancy.—Music for children should be suitable both in its style and in its grammatical construction. Sacred music should be taught for the worship of the school, and with a view to that of the church; but it should be of light and lively complexion. Secular music, by which the child gives utterance to the natural joyousness of his years, must be added to sacred: of a rhythm well-marked and simple, of a range of notes not too great for his voice so as to strain it by ascending too high or descending too low (say from E to E, treble staff), of short melodious intervals mostly diatonic and common chord, of lively mode as befits the emotions of his age, leaving the grave and plaintive mode to express the feelings appropriate to maturer years. Melody alone is sufficient for the wants of early childhood: the teacher may after a time sing a second part at discretion; but part-singing is at this stage superfluous and indeed not intelligible.

406. The Aim of School-Instruction in Singing.—Having taught the pupil to sing by ear, the rest of the instruction has for its aim to teach him to sing from note. The analogy of learning to read may help us to comprehend what is implied in this. The instruction in reading given in the common-school, should enable the pupil to read not the highest kind of rhetorical or scientific discourse, but such narrative as he is likely to meet with in life, and on which he will depend for his future instruction, *e.g.*, the English Bible, and his newspaper or other serial: not by a process of slow mechanical deciphering, but with such intelligence and facility as shall give him pleasure in the exercise, and hold out some prospect, therefore, of his continuing it for himself after he has left school. The case is similar in regard to singing. The pupil should leave school able to read from musical notation, not high class music as that is commonly understood, but such music as he is likely to meet with, both in sacred and in secular song; and he should be able to read to this extent, not with a laborious deciphering of the notation, but with such intelligence and facility as shall make the exercise a pleasure to him, and therefore secure his perseverance in it throughout life.

Such is the degree of musical skill which the school should aim at imparting, and which it may reasonably hope to impart.

But we must take into account the actual knowledge of song with which it may furnish him, as well as the power of singing. In the first place, it should give him an acquaintance with the music of the church, so as to enable him to take his part therein with intelligence and interest; in this respect, it may easily fit him to join in all the ordinary services. Secondly, the school should put him in possession of a body of good songs, suitable for family or social singing: both of a national and of a general character. "One of the chief means of diffusing through the people national sentiments is afforded by songs, which embody and express the hopes of industry and the comforts and contentment of household life; and, preserving for the peasant the traditions of his country's triumphs, inspire him with confidence in her greatness and strength. . . . The national legends [or national modes of thought], frequently embodied in songs, are the peasant's chief source of that national feeling which other ranks derive from a more extensive acquaintance with history. The songs of any people may be regarded as important means of forming an industrious, brave, loyal, and religious working-class."[1] Every good song which is made familiar to a school is a pleasant and powerful source of influence over a large number, in behalf of the virtue or sentiment which it embodies.

407. Diatonic Scale and its Intervals.—We may conveniently regard as the first stage of the pupil's progress, his learning to sing the notes of a given diatonic scale, in any order, of different lengths, and in the more common rhythms.

In teaching the notation, the teacher should, as he goes along, make the pupils distinctly conscious, by reference to the experience they have already accumulated, of the several features of musical sounds for which notation is needed: *e.g.*, the differences between them as high and low, or as long and short. Difference of pitch will naturally engage attention first. It is unnecessary to explain here the structure of the diatonic scale: we shall suppose the teacher to know that the pitch of musical notes is measured from an assumed standard or key-note, and that his lessons on pitch must have for their object to teach pupils to sing the scale and its intervals. That being so, we may

[1] *Min. Counc.* 1844, vol. i., 'Minute respecting Vocal Music;' *School-Songs and School-Psalmody*, Constable's Educational Series.

perceive the natural order of steps to be something like the following :—

Let the diatonic scale be sung 'by ear,' ascending and descending, to the numerals from one to eight (but see § 410), and also in the order 'one-two,' 'two-three,' etc. Then let the intervals of the common chord be practised, till the pupil can sing them all correctly. Direct attention, by reference to particular examples, to the fact of the difference between the sounds in pitch. Lead the pupil to see that a suitable mode of indicating the sounds by signs ought to suggest this difference to the eye.

Write down the treble staff and give a form-lesson upon it; this is the first point of musical notation which meets him. Observe the lines and spaces, separately and in combination, so that it may appear how many degrees there are upon the staff, and how they are reckoned. Give exercises in telling the degrees upon it. Bring in the leger lines at discretion.

Connect the degrees of sound in the scale with the degrees of the staff, using any convenient mark in the meantime for the sounds; by which it may appear that of two notes on the staff one denotes a sound above or below the other. Take the crotchet as the first form of note; for the pupils at this early stage are unable to sing sustained sounds, and feel them to be uninteresting. The scale of crotchet-notes on the staff thus appears suggestive of the scale of sounds. It is immaterial from what key-note the scale is sung, provided it suit the compass of the pupil's voice; but, considering the system of notation in actual use, that of C is the most convenient to begin with.

Intervals must be practised, selected from the one scale before the pupil, till he can associate any interval of sound and its corresponding interval on the staff with a fair degree of facility. It will then be worth the teacher's while to write down a succession of intervals in the manner of tunes, to accustom the pupil's eye to the succession of notes. The test of progress is the quickness with which the pupil can sing, as well as name, any interval which may be denoted on the staff.

408. Notation of Sounds as Long and Short.—By examples, the pupil should be led to recognise that some sounds are long, and others short; and then to see how the notation of them

indicates the difference to the eye. There is nothing in the staff to indicate it; and so a difference in the form of the notes is resorted to.

Fix attention on the sound which is of two beats' duration, and contrast it with that of one beat, which he has been practising. Have the scale and intervals sung with sounds of that duration. Draw the minim on the board, and then on the staff, showing its construction, and the different positions it may occupy. Exercise the class in singing intervals from the minim-scale, and from tunes written with minims.

Pursue a similar course with sounds of four beats, represented by the semibreve; but the beats must not be slow. The quaver may be introduced now or later, at the teacher's discretion.

Observe that in learning the notes the exercise is twofold: a sound-lesson, and a form-lesson; the singing of sounds denoted by minim or crotchet to accustom the ear to their length, and the study of its form on the teacher's black-board and the pupils' slates; which should be permanently ruled with a staff for such purposes.

When the sounds of different lengths and their respective notes have been studied separately, they may then be gradually intermingled in the singing exercises.

409. Rhythm.—In these early exercises, rhythm may be *assumed:* it is an instinct before it needs to be made a matter of conscious knowledge. Following the general rule, the *thing* must be brought under the pupil's notice, before any explanation is offered of its notation. The simplest way to do this is to fix upon some of the tunes he has learnt, and have it well rehearsed; then call attention to the fact that some of its sounds are uttered with greater force than others. Set him to imagine any way in which this might be denoted to the eye, as, for instance, by marks placed over the strong notes. Explain the way in use, viz., the placing of *bars* before them, so as to divide the piece into *measures:* notice the regular recurrence of the strong notes.

Nothing need be said for a time about the signature of the rhythm; that is not a necessary part of its notation, but a mere matter of convenience. The pupil should be accustomed to look for the rhythm to the measures themselves, so as to be able to say what the signature should be, rather than to assume the rhythm from its signature. It will be time enough to advert to

the signature when some familiarity with the division by measures has been gained.

One rhythm should be taken at a time, and those alone need to be noticed which are in common use. Along with the notation, it will be necessary to explain how the lengths and accents of the sounds are indicated by 'beating time.' The pupil has not the means of singing accurately in rhythm or time, unless he knows the theory of the 'beats' which the teacher employs to regulate the succession of the several sounds.

To accustom him to interpret the notation of rhythm confidently, the teacher should give exercises in form on the board, and to a certain extent on the slate. For instance, he may write down a piece of melody, have it sung with different rhythms, and require the pupil to indicate the barring of the several rhythms; or he may require them to write down a few bars according to a given figured signature.[1]

410. Different Scale-Notations.—There is but one diatonic major scale of musical *sounds;* but it may be sung from different key notes, so that there are many diatonic major scales to be learnt as a matter of musical *notation.* The ear has already done its part in learning the scale, since the succession of intervals is the same from whatever sound the scale is sung, and therefore one scale is as easy to sing as another; but the eye has still much to do. We may conveniently regard the learning of the several scales, *i.e.*, the association of the scale of sounds with each of its notations, as the second stage of progress in learning singing.

In addition to the C scale, the pupil has to learn scales on D, E (which will serve both for E and E♭), F, G, A (which will serve both for A and A♭), and B (which will serve both for B and B♭). Each has to be learnt separately, and to be practised sufficiently to make it quite familiar to the eye: one cannot be learnt through another, however much they agree in their theory. And the kind of practice that has to be given in each is identical with what has already been described under the scale of C.

The question arises at this point whether the theory of the scale-notations should be explained at the time when they are presented to the pupil for singing. There is no absolute necessity for this, as any scale of notes, that on F for example, may be

[1] Central Society of Education's first volume.

sung just as readily as that on C, provided it be understood and marked in some way that F is the key-note. Accordingly, in some manuals, the explanation is deferred, and the practice at once proceeded with. In others, the scale-notations are associated with their respective signatures at once; *e.g.*, the *flat* on the third line is pointed out as indicating that F is the first note of the scale; the sharp on the fifth line that G is the first note, and so on; but the explanation of the reason why the flat or the sharp occupies that position is deferred. The third method explains to the pupil the construction of each scale-notation, as soon as it occurs in course of the singing-lesson. So far as the singing is concerned, it does not appear to be of much importance which of the three plans be followed; but explanation of the scales may be made intelligible at a pretty early age, and should not be deferred longer than is absolutely necessary. There is this advantage in explaining the signature of each scale in connexion with the singing of it, that one scale must be taken at a time, and sufficient time is given to the pupil to become perfectly familiar with the theory as well as the practice of its notation, before he goes on to another. When this explanation is given, it should be according to the following steps :—

Write down the scale of C, and have it sung; for the purpose of directing attention to the difference between whole tones and half-tones, and their respective positions. The occurrence of the half-tones between the 3d and 4th (E and F) and between the 7th and 8th (B and C), is now to be accepted as the mark of the major-scale.

Have the new scale, F suppose, sung; the series of eight notes on F written down on the staff; and the intervals of that series adjusted to correspond with the intervals of the scale. This will lead to the insertion of the *flat* before the fourth note.

Explain the *flat* ♭, as to its purpose, form, and position, requiring the pupils to make it on their slates; and associate between the occurrence of one flat, and the key-note F. Exercise them in writing down the scale of F, with its signature; and question them on the position of the half-tones at the beginning of each singing-lesson.

The scale of G should be explained by similar reference to that of C; the remaining scales should be taken in order, and each

explained by reference to the scale from which it is formed, B♭ from F, E♭ from B♭, D from G, and A from D.

It is not meant that the *practice* of the scales of F and G is to be separated from that of C by a sharp mechanical boundary, although we have considered them apart. No such absolute separation is made, or can with advantage be made, between the parts of any subject. The rules of arithmetic, for instance, are explained separately, and each receives its own special practice; but one rule is not exhausted before another is taken up, so that the practice of adjacent rules is carried on together. So in singing, the teacher must determine for himself upon consideration of the circumstances of his class, how far they may advantageously combine the practice of several scales. This is one of those important practical points regarding which no general directions can be given, but in which the skilful teacher shows his art.

It has been made a question what nomenclature should be used in practising the several scales. Should it be the same for all the scales, to point out that the sound-scale is one and the same, or should it be varied to correspond with the various notations? There can be little doubt that the sameness of the sound-scale should be accepted as the ruling consideration, and that the same nomenclature should therefore be employed for singing from all the scale-notations. In this way, the same intervals will always be denoted by the same terms; which will much facilitate the pupil's progress. As to the particular nomenclature that should be employed, the names A, B, C, etc., applied to the notes to determine their *absolute* pitch, are excluded by the supposition of a single nomenclature. We have to choose between the two which are in common use to denote the *relative* pitch of the notes, viz., the syllables do, re, etc., and the numerals, one, two, three, etc. The syllables have the advantage of being better adapted for musical expression, and are not liable to the objection that may be made to the numerals, that they are required for the purpose of beating time. On the other hand, the numerals are manifestly a more suggestive notation, since after all numbers must be present to the mind in some way in reckoning the intervals on the staff. Admitting that the pupil may make good progress, whichever be adopted, we are disposed to think that, for the purposes of the common-school, the nomenclature by numbers is to be preferred.

We conclude, then, that in singing from any of the scale-notations, the notes should be designated by the numbers which denote their intervals from the tonic or key-note as number *one*.

411. Modulation.—We speak here only of what may be regarded as the 'natural' modulations, that is, those which are made from a given tonic into any of its immediately related keys. A mastery of the remoter modulations can hardly be considered as falling within the scope of common-school instruction.

Modulation, such as that from the tonic into the key of its dominant, occurs in tunes of the simplest construction: it cannot be avoided without limiting the selection of tunes in an extreme degree. As soon as two scales thus related are learnt separately, the teacher will feel the expediency of combining them in singing. The trouble of learning to read the notation by which modulation is represented is entirely a matter of the eye: the ear readily follows, and guides the voice in imitating, simple modulation, as much so indeed as the single scale itself, and without the consciousness that there is any particular difficulty calling for explanation.

The difficulty of singing from note a modulated passage lies in this, that the pupil must understand its theory before he can apply his nomenclature to the singing of it. Thus if we have the following phrase C, B, A, G, F♯, G, which consists of so many notes in the scale of C, and so many in that of G, it is plain that the nomenclature used for either scale alone is inadequate. Sometimes the passage is sung as if it were in the one scale of C (8, 7, 6, 5, 4, 5, or do, si, la, sol, fa, sol); this is not only wrong, but incompatible with the use of any regular nomenclature. Not to dwell here on the double aspect presented by the sound (G) fourth in order, the last two sounds are 7 and 8 (si, do) in the scale of G, and must be so sung; so that the whole phrase must be sung thus, 8, 7, 6, 5—7, 8 (do, si, la, sol—si, do). But the pupil cannot do this, unless he sees that there is modulation, and what it is. The attempt must be made, therefore, to explain to him the nature of modulation, if he is to sing such a passage as this intelligently. Fortunately the attempt is by no means hopeless, considering that it is with melody alone that we have to deal, and that it is a very limited range of modulation which needs to be explained.

The simplest form under which the idea of modulation can be

presented to the pupil is, that two scales are often combined to make up a tune; which can be illustrated by reference to a passage of some familiar tune in which modulation occurs, and writing down the parts of the two scales that enter into it, first separately, and then together. This is quite comprehensible: what remains to be explained is the *parts* of the two scales which are employed, so that the pupil may see the reason of the nomenclature applied to the singing of the combined passage. Each modulation must be dealt with singly, that into the dominant being taken first and practised thoroughly as being the one of most frequent occurrence: it is the simplest to explain, moreover, and the understanding of it will help the pupil to comprehend the explanation of the others. It is plain that his comprehension of the combining of scales in modulation will depend very much on the thoroughness with which he has learnt the notation of the component scales separately: with the view of preparing for modulation, therefore, the characteristic note of each of the scales should be carefully explained when the construction of them is under consideration. The pupil must know what are the signs of any one scale; otherwise he will never really know what scale he is singing in, or when the passage which he sings passes from one scale to another. After the necessary explanation of a modulation has been given, it will be expedient, in singing tunes which exemplify it, to give him assistance for a time in determining the nomenclature.

412. On the Learning of School Songs.—Melody alone is sufficient for the youngest children; but the songs and psalmody of middle classes should be sung in two parts, and of advanced classes in three parts, viz., two trebles and alto, specially arranged to suit the compass of their voices. The principal directions required for the practice of them are the following:—Their key-note, signature, time, rhythm, and marks of expression should be first examined; they should be sung in the first instance with the syllables or numbers which the class may have been in the habit of using in their singing exercises; they should be sung in separate parts or in full score at once, according to the advancement of the class, the second and third parts being first presented when it is deemed necessary to practise the parts separately; the words of the song should be learnt off, after any explanation which

may be required, that the class may not have too many points to attend to at the same time; and, when they have been sufficiently practised from the black-board or text-book, they should be sung entirely from memory, for the sake of the higher pleasure and excellence which are thus attainable in part-singing.

Special attention is due in school-singing to expression: within the limits, of course, to which it is practicable. The faults most liable to be incurred are over-loudness (through which the singing passes into shouting), a heavy dragging of the rhythm, and coarseness of utterance; the teacher should therefore from the very first aim at imparting a generally soft style of singing as the basis of all expression, liveliness and cordiality of manner to preserve the buoyance of the music, and correctness and distinctness of articulation. He should, moreover, be careful to ascertain that the pupils really sing the parts assigned to them: every one knows how common it is for pupils imperfectly instructed in their parts to substitute the melody or first treble an octave lower. This has a peculiarly disagreeable effect in school, and, if tolerated, is fatal to good singing; the only remedy for it is to instruct them better in singing their separate parts. To conduct the singing lesson well, activity, vivacity, and good humour are required on the part of the teacher; to produce these qualities in return from the pupils, a proper position of the singers towards each other and a proper posture of each individual singer, are important considerations. Finally, part-singing will never be performed with really good effect, unless the teacher set up for himself a high standard of excellence, and have frequent rehearsal of the same songs with a view to that effect, after the technical difficulties have been overcome.

It is not simply singing that cultivates the taste and makes the practice of the art a pleasant recreation, but singing with expression; indeed, unless expression be the teacher's chief aim, we should regard it as a matter of small moment to what extent he teaches singing at all.

In speaking of teaching the Art of Reading, we saw that the means of instruction are threefold, instruction, example, and practice; and that, if any one of these means be wanting, the reading must be deficient in one of its great elements, intelligence, taste, and fluency. The teaching of singing as an art of expres-

sion is to a great extent analogous with that of reading, as has sufficiently appeared: we have now to remark that the same three means must all be employed in teaching it, and that, if any one be overlooked, there will be the same kind of deficiency in the result. Without instruction, there cannot be intelligence; without example, which shall hold up good models for imitation, there cannot be expressive or tasteful singing; and without sufficient practice there cannot be correctness or fluency. Perhaps the second of these means is the one most neglected; much bad singing, as well as much bad reading, arises from the absence of example to show 'how it is to be done,' without which mere instruction cannot be fully understood, and practice may only be the practice of a bad style. The teacher must sing to the class, to show them how they are to sing. To do this is undoubtedly a great demand on his strength, considering how frequently it is required, and how much other work of an exhausting kind he has to perform. He would therefore find the greatest advantage in having a musical instrument in school, and in being able to play on it a little; a moderate degree of such ability would serve the purposes of school-singing. Managers of schools, and all who are interested in this branch of instruction, might well add a plain useful instrument to their school apparatus. If this were not advisable to prevent undue straining of the teacher's physical powers, it would still be most advantageous from the good influence it is calculated to have on the singing of the school in respect of 'tune' and expression.

CHAPTER XII.

HISTORY.

413. The Study of History.—"The general idea of a history," says Dr. Arnold, "seems to be that it is the biography of a society. It does not appear to be history at all, but simply biography, unless it finds in the persons who are its subject something of a common purpose, the accomplishment of which is the object of their common life. It is to this common life of the many what biography

is to the life of an individual. . . . But if the life of every society belongs to history, much more does the life of that highest and sovereign society which we call a nation. . . . And thus we get a somewhat stricter definition of history; we may describe it, not simply as the biography of a society, but as the biography of a political society or commonwealth."

The nature of the study of history may be best illustrated by an example.—Every one reads the history of the crusades with intense interest. The gathering of the Christian hosts, their journey to the land of promise, their endurance, self-sacrifice, and valour, the ebbing and flowing tide of victory, the chivalry of the heroes conspicuous on either side; all go to make up a fascinating picture, which we study with pleasure and remember without difficulty. But, simple and attractive as is their outer history, their inner is deep and difficult: of the many who read, there are few who interpret as they read. There were three great principles in European life during the so-called Dark Ages: reverence for church authority was the spirit of the religious relations of men; feudalism of the political; and chivalry of the social. The first of these, acting with the supremacy which man's nature instinctively allows it, bent the other two to its will and found in them the instruments of its designs. In the crusades we have a movement embodying all the three elements; religion determining the object, feudalism supplying the means, and chivalry prompting the personal desire to engage in them. To find their consequences, we must go not less deeply below the surface than to find their causes. We have first to notice how, after they were persevered in for centuries, it was from within themselves that the day of deliverance from them came to Europe. For by them members of the modern European continent were first roused to individual activity; the various countries had to act in presence of each other, and came to know their own power and their own interests. The period of the crusades laid the foundation of the modern European system. Further, not to dwell on the impulse given to knowledge and enterprise by the searching contact between the eastern and the western world, we must attribute to them some share in bringing on the period, still distant, when the independence which the nations had procured for themselves should be vindicated for individuals. The one being attained, the other could only be a question of time. And thus spanning over two centu-

ries, which is not a very great interval in the history of the world, we connect the Crusades with the Reformation. We might take any of the great events in history, such as the overthrow of the Roman empire, the rise of the burghs, or the Reformation, and subject them to an analysis, equally difficult yet equally fertile in results.

The qualities required for historical study in this higher aspect of it are obviously rare. As the principal we may recognise diligence and patience of research into the authorities for the particular epoch, so that the materials of knowledge may be sufficiently extensive; calmness and penetration of judgment, which, whilst able to take in at once a wide circle of events, loses not sight of points apparently trivial (since these are often of the greatest influence), and which can steer its way between opposing accounts, allowing for the prejudices of national or personal belief, and guarding against the sophistries of reasoning or of style; a vividness of imagination to summon up the actors of past times as living realities, to see them acting, hear them speaking, and almost trace their thinking; besides a deep knowledge of human nature, both from within as the result of self-examination and reflection, and from without as the result of observation and experience, but for which we cannot judge of the present, and therefore can have no criterion to judge the past. The ultimate design of the study of history is not only to acquire knowledge but to form the judgment, so that it shall be able to apply the lessons of past times to the present; or, as we may otherwise express it, so that it shall judge of the past as of the present; and this design is not to be attained without the high mental and moral qualities which have been named.[1]

414. Philosophy of History Unsuitable for Schools.—Considerable confusion of ideas prevails on the subject of teaching history in school. The adult student is never satisfied with mere facts; he longs to rise to those generalisations which are recognised as the highest product of historical judgment. These dazzle his mind from their grandeur, their comprehensiveness, and the order they seem to introduce into the multitude of facts which make up a history. But in proportion as they are attractive and satisfying, they are dangerous. It is not for every one to venture on the task

[1] Arnold's *Lectures on Modern History; Friends in Council, Essay on History.*

of extracting philosophy from history. In nothing is the judgment so apt to go astray as in attributing motives to men; it is so in estimating contemporaries, how much more must it be in estimating the men of past times, of whom we have not the same experience! Even the student who has come to full maturity of mind must proceed with the greatest caution to his conclusions. It is necessary to guard the teacher against the fallacious notion that, because this is the highest aspect of historical study, it therefore indicates the field in which he should expatiate with his pupils; only the uncertainty which notably attaches to historical judgments could allow this notion to be entertained for a moment. In the exact sciences, the profoundest judgments may be brought to the test of facts and ascertained to be either right or wrong; we have no such test for the contingent reasoning with which history deals. Yet the study, so far from being easier on that account, is more difficult, and should be pursued with the greater caution. From these considerations it is plain, that the demand for what is called the 'philosophy of history' in school is false and mischievous. The requisite mental qualities being entirely wanting in the pupils, the effort to impart it is simply an effort to import into his mind the judgments of others, which from the magnitude of the topics with which they deal he cannot comprehend. And so we have an example of extremes meeting; for the instruction, if we are to call it such, so far from its having the highly intellectual character which it affects, is mechanical instruction of the worst sort. It not merely fails of its object; it unfits the pupil for attempting the higher study of the subject afterwards, whilst it prevents him from acquiring that knowledge of it which is within his reach at the time. We might mention, as another reason for moderating pretensions in teaching history in school, the fact, that the time at disposal for it is small, and will be fully occupied in impressing the outline of facts on which all historical judgment whatever must rest. On the whole, we conclude that the discipline of mind peculiar to the study of history is unattainable in school, and that therefore neither should text-books discuss the subject, nor teachers investigate it, as if it were. By all means let the teacher know that his subject has a higher aspect; if he has studied that aspect himself, he will find his advantage sufficiently in being able to group the facts of history more certainly according to their true

connexion in his teaching. But that should be the limit of his attempts to deal with philosophical history.

415. Aspects of History to be taught.—The teacher will find it sufficient to carry his pupil along the narrative of events which supplies the materials of historical knowledge. Objection may sometimes be justly taken, however, to the kind of facts dwelt upon. School-history has hitherto been little more than a record of wars, and of the genealogy and personal peculiarities of sovereigns. In giving prominence to wars, teachers have only followed the examples of historians themselves, who have confined their narrative too exclusively to these ; whilst the personal history of sovereigns has been studied under the idea of their representing the state which they governed, and also because, from its being biography rather than history, it admits of being made more interesting and easily intelligible to the pupil. The first reform in the teaching, as in the writing, of school-history, should be to assign to these wars of a nation their true position and character ; instead of measuring national prosperity or greatness exclusively by its warlike achievements, we should regard war in general as a divergence from the true course of a nation's history, both on moral and on social grounds. There is but one kind of war that can be dwelt on with complacency, and that is a war for liberty and independence, whether these are attacked from without or from within. Every nation has one such (may we not say only one ?) to recount. England has its war of the Commonwealth, Scotland its war under Wallace and Bruce, America its war of Independence, and France its wars in the fourteenth and fifteenth centuries with the English. In the spirit of such wars youth should be deeply indoctrinated ; for one end of their study of history is to make them love all that is noble in their country. But wars of aggression, or wars undertaken on insufficient grounds, are not to be palliated, much less to be boasted in, however favourably they may display its military prowess. The arts of peace, which have been almost overlooked, should be raised to the position of prominence hitherto assigned to those of war : *e.g.*, the progress of a people in political and personal liberty ; the development of its social condition as indicated by its growing skill in manufactures, agriculture, and commerce, and in the comforts depending on its dwellings, food and clothing, mu-

tual intercourse and amusements ; and its advancement in intellectual, moral, and religious cultivation, as depending on the diffusion of literature, the founding of schools, and the like. These topics are not only more instructive and civilizing than military history, but may be made equally interesting in narrative to the pupils.

A well-selected chronology can never be otherwise than essential.

When the stream of history has been traced down to the present time, the historical instruction resolves itself into a description of the position to which the course of past events has brought our country. This should not be overlooked ; for it is the crown and consummation of the whole. The teacher should therefore give his pupil a connected view of the geography of the empire ; which will unfold its extent, its wealth, and its political power. And, if the text-book of history do not make provision for it, he must by oral instruction communicate so much knowledge of its institutions, and of the rights and duties of its people, as citizens of a free country should know. (§ 75.)[1]

416. Classification of Historical Facts.—To attempt to teach the facts of history without selection and classification is a hopeless, not less than an unprofitable, task. The mind will not be able to retain them ; nor, if it could, would it necessarily have a just impression of the order of events. A historical narrative may contain nothing that is not true ; and yet, by failing to present the facts in their due relation, and treating them all as if they were of equal importance, may be distorted and false. The object of the classification at which we aim is, therefore, to bring them into prominence in the degree of their importance, and to set aside altogether those which are of little influence on the life of the nation. The classification which is guided by centuries or the reigns of successive monarchs, does not attain this object ; being arbitrary and founded on accidental circumstances. The best course to follow is to divide the history of the country into epochs ; each being marked by one great event. Thus, without pretending to perfect accuracy, English history would present itself under an outline like the following :—Roman occupation—Saxon invasion—conversion of the Saxons to Chris-

[1] *Min. Counc.*, Mr. Moseley's Report, 1847.

tianity—Danish inroads—Union of the Heptarchy—Norman conquest—English dominion on the Continent—Scottish wars—French wars—Wars of the Roses—Reformation—Revolution—Union of the Crowns—Establishment of the Colonial Empire—Wars of the French Revolution—Long Peace. Such an outline contains all the facts which are of the first rank in importance; and these are so many centres round which should be grouped those which are in one degree subordinate. Thus, in dealing with the Scottish or French wars, it would be natural to consider the circumstances that led to them, the parties by whom they were carried out, the incidents that had most influence in determining the result, and the result itself. These important steps in the history should be dwelt on with emphasis and with some amplification; for which purpose they may with great advantage be exhibited in their connexion on the black-board; whilst the mass of unimportant incidents accompanying them should be condensed into short space, if, indeed, they be noticed at all. Such an outline as that just given has reference primarily to the political history of the nation; but it will be found to serve equally for its social history. For the prolonged activity required to effect political changes of such magnitude will invariably be found to issue in correspondingly great changes of social life, through all its phases.

This mode of presenting the subject according to its great natural features, may be compared with that of teaching geography on the basis of physical configuration. There is another kind of classification, both in geography and history, according to which facts are arranged, not by their organic connexion, but by their individual resemblances. Thus, in the one subject, the rivers of a country may be arranged by themselves, then the mountains, and so on; and in the other, the course of events may be learned under the aspect of a succession of kings, or a succession of wars, or a succession of any kind of isolated facts. But as the one method can give no idea of the aspect of a country, so the other can give no idea of its life. This can only be obtained, when events are studied in their natural connexion, that is, as they influence, and are influenced by, each other; nor is there any other way in which history can be intelligently studied than that in which the mind works according to those principles

of association which are part of its constitution (§ 119). It is not always necessary, however, in dealing with history, to exhaust the outline of its parts, or to treat these as of equal importance. The teacher of a common-school will doubtless feel that his pupils are much less concerned with the early history of the country than with its later; so he will pass lightly over periods which have no connexion, at least no palpable and vital connexion, with the present state of it, and dwell most on those which have determined its modern institutions. The Roman occupation, Saxon invasion, Danish inroads, Norman conquest, and even the Wars of the Roses, may be said to belong to the ancient history of England: their connexion with the present time is at best remote, and cannot be realized by children; the periods of the Reformation, Revolution, and the like, stand in a very different position. If his text-book is not constructed on this sound principle, the teacher must nevertheless give effect to it himself in his manner of treating the different periods.[1]

417. Biography in History. — History includes biography. Each epoch in a nation's history is associated with the lives of some great men, who have given to it its character; so that the biography of the latter is often to no inconsiderable extent the history of the former. From the unity of its subject, biography is more level to the capacity of the young than history; and thus history becomes the more instructive and interesting to them the more it is interspersed with biography. They can sympathize with the acts and dispositions of an individual, to a degree beyond what they can do with those of a society or a nation. The biography of eminent characters should therefore be interwoven into the history which is taught in school. This cannot, and need not, be done to a great extent in early times; there are not sufficient materials, and besides, we have supposed that the history itself of these times is not gone into in detail. But as the stream of time rolls on, there are abundant materials in every department of biography. The names of Augustin, Ethelred, and the priest Coiffi in the period of the Saxon conversion—of Alfred in the Danish inroads—of Wallace in the Scottish wars, may be mentioned in early British history; but in its later periods suitable characters for this purpose are so numerous that they need not

[1] *Min. Counc.* 1859, p. 261.

be specified. It may be observed, that we should not confine ourselves to the lives of men who are called great in the ordinary sense of the word; the lives of many who have given themselves to the pursuit of the useful arts will often be found, if less conspicuous, not less interesting and instructive, than those of men who have played a prominent part in the management of public affairs. The most useful lessons are often to be learnt from the manifestation of the quieter virtues in circumstances not differing much from those in which the ordinary life of individuals is passed.[1]

Along with the biographies of eminent individuals, or rather as the basis of these, should be given what may be called biographies representative of the different classes which have successively existed in the state. For example, in dealing with the Norman period, it would amply repay the labour to draw before the class portraits of the king, the baron, the feudal retainer, and, in his own independent position, the bishop or ecclesiastic. Coming down the stream of history, new classes should be illustrated as they arise; the early English sailor and soldier, the cavalier and the puritan, the chief and the clansman, the citizen and the peasant, should all figure on the canvas; made life-like and interesting by comparison with their corresponding classes at the present day.

The study of this department of instruction should derive large benefit from such a course of private school-reading on the part of the pupils as has been already suggested; as well as from the practice of reading to his pupils on stated occasions, which has been already recommended to the teacher.

418. Character of the Study as a Mental Exercise.—Though the higher aspects of the subject have been expressly excluded from consideration, it does not follow that the study is of an unintellectual character. It is one which requires the exercise of as much *judgment* as the pupil possesses. This is apparent from the manner in which the course of instruction is divided. The leading events are considered, so far as the pupil can consider them, in connexion with their causes, means, and consequences. Thus, to refer again to the period of the Scottish or French wars, when we point to the circumstances out of which they sprang, we have to submit to him whether the real cause

[1] *Museum*, No. I.

coincides with the ostensible one; we notice the parties engaged, and we require him to estimate their prudence, vigour, and bravery by their actions; we endeavour to make him feel the more obvious results of the struggle, and how these directly flowed from it. The memory is doubtless tasked to commit the leading facts, but not till the judgment has done its work; in which case it is a rational and not a mechanical exercise.—In addition to the habit which it requires of judging between things related to each other, as cause and effect, or as means and end, the study of historical narrative, like that of geography, requires the constant exercise of *comparison* between things which are not in juxtaposition. To engage with profit in reading the history of other countries, we must at every step compare their condition with that of our own. In studying our own history, it is equally incumbent on us to be constantly comparing the circumstances of the country in one epoch with its circumstances in another, particularly the present. What the pupil knows of the present is his only criterion for judging, and therefore his only means for understanding the past. "Is the full and distinct impression," asks Dr. Arnold, "of events, character, institutions, and ways of thinking of any period the true historical knowledge we require? No: that is no more than antiquarianism, an indispensable element in history, but not history itself. . . . It wants the essential accompaniment to all our knowledge of the past, a lively and extensive knowledge of the present." When we read of an institution, a legislative enactment, or a social habit characteristic of a past age, we must point out the advance which it exhibited upon the age preceding, and then turn to its representative in the present to note how far we have advanced upon it. At each step in political freedom we should note what the age still wanted of our privileges; as each new means of diffusing knowledge was discovered, the obstacles that still remained to be removed in later times; and as any improvement in the arts of industry and life was struck out, how far they had still to advance before they could reach the comfort we now enjoy. In this way only is it possible to study in history the progress of a nation's life. Without this ever-active spirit of comparison, the past is separated from us by an impassable gulf, it has little reality and interest for us. Its actors are but spectres and not men, unless they

are studied by the light of the present.—The study should be eminently a work of the *imagination*, and that in a double sense. The pupil has in the first place to receive a lively impression of the succession of events from vivid and highly coloured description; but beyond that he must endeavour to realize the life of the past. He has to call up the actors before him, to see them in their occupations, to enter into their feelings, and to give as it were a visible form to the scenes in which they moved; to live for the time, in short, in the age which he is studying. If he effects any deep and lasting apprehension of bygone periods, it is by thus setting his imagination at work upon them.—Thus, to whatever extent the pupil is able to pursue the study of history at all, he must be led to exercise to the full all his power of judgment, comparison, and imagination.

But history should be studied with a moral purpose as well as an intellectual. No one who is not more or less acquainted with his country can feel an enlightened interest in its fame and its privileges, can judge of those discussions of vital moment which are unceasingly on the lips of a free people, or can understand its current literature. And he is excluded from all those pleasant associations which almost every spot of its soil suggests to him who has traced its growth from infancy to manhood. But beyond contributing in an indirect way to raise the whole tone and temper of those who read it, history stands forth with claims to be regarded as a great moral teacher. It exhibits the punishment of crime, it may be after temporary success; and, where crime seems to prosper continuously, the miseries which follow in its train. It draws lessons of personal improvement from the characters who appear upon its stage, whether good or bad; from the devotion of the patriot, the fortitude of the martyr, the integrity of the honourable, and the charity of the pious, not less than from the craft and falsehood of the intriguer, the corruptness of the unjust, and the unscrupulousness of the selfish. The reader should have his own character heightened by the attraction of the virtuous and by the repulsion of the vicious. Thus it is that this subject occupies no mean place amongst the instruments for forming the moral judgment of youth.

419. Extent and Order of the Study.—The only question of importance which remains is that concerning the extent and

order of this study which should be recognised in school. Are we to commence at the beginning of the world, and find our way gradually down the stream of time till the present day? It were beyond the power of the school to compass such a design, even if it were judicious; but it would not be judicious, for it would lead us to violate a precept which holds good in all elementary teaching, that we should first take up that part of a subject which the pupil is most interested and instructed in knowing. We must begin history, then, as we do geography, *at home*. The immediate object of the study, so far as the school is concerned, is to give the pupil some acquaintance with the history of his own country; so that he may sympathize with its traditions and its fame, appreciate its laws and institutions, and love its soil and its inhabitants. To this, accordingly, the time which the school can afford must in the first place be devoted. There are very few cases in which time is entirely wanting for this purpose: it may generally be attained in combination with that of the English lesson, since historical narrative affords as good scope for the investigation of the sense and the grammatical structure as any other. There should, however, be occasional connected revisal of the subject-matter, so that the historical aspect of the lesson may not seem to be entirely absorbed in the linguistic. Advanced classes alone should study history systematically: with younger pupils more should not be attempted than may be acquired from the insertion of some passage in the daily reading-book, descriptive of important incidents or of character: advanced classes may pursue the study from a separate text-book, used alternately with the ordinary reading-book.

It is desirable, however, to give the pupils some notion of the leading events in general history; nor is it impossible to do this, as will appear by considering the channels open to the teacher for such instruction. To speak first of ancient times. No particular reference has been made to Scripture history hitherto; we assume this to be taught on higher grounds than the mere historical knowledge which it conveys. If we view it as mere history, it would not claim to bulk so largely in school teaching, or to be begun so early, as universal opinion requires it. It is taught as the means of religious instruction; and therefore we do not consider it as coming into competition with other de-

partments of history at all. Nevertheless it is history ; and will introduce the pupil to the most important events in the history of the ancient world. For the Pentateuch teaches something of Egypt as well as of Canaan ; the historical books of the Old Testament something of the Assyrian, Babylonian, and Egyptian empires as well as of the Hebrew monarchy ; the prophecies (supposing the most important of these to be studied) require some reference, in addition, to the Persian and the later Greek kingdoms : whilst the New Testament history is largely mingled up with events which can be understood only by illustrating the condition of the Roman empire. The pupil requires no further knowledge of ancient history than may, and ought to be, thus connected with his study of Scripture. For modern history, the teacher's resources are chiefly these two :—(1.) Premising that it is neither necessary nor possible that the history of all modern countries should be adverted to, but only that of the most important, it is to be observed that the history of his own country is to a great extent the history of its relations with other countries, and therefore presents sufficient opportunity for noticing the most important events in their history.—(2.) In studying the geography of foreign countries, opportunity is given for referring to important historical incidents in connexion with the places with which these are associated (§ 399). In these ways general history is adequately provided for in school, without our claiming any place for it as a special study, in the oral exposition incidental to the teaching of the sacred and civil history which are recognised everywhere as substantive parts of the course of instruction. Whether it be handled effectively or not will therefore depend on the skill in such exposition of which the teacher is possessed.[1]

CHAPTER XIII.

RELIGIOUS INSTRUCTION.

420. Method in Religious Instruction.—Religious instruction must be considered under two aspects :—It is a branch of

[1] Raumer in Barnard's *Amer. Journ. of Education*, No. xx. ; *Min. of Counc.*, 1853, pp. 841-843.

knowledge, and, as such, is subject to the same laws of teaching as other subjects. The child will not, as the adult may be expected to do, listen to it with peculiar reverence merely from its own pre-eminent importance. He is not yet master of his mind, and he cannot, if he would, give his attention where that is not gained from without by some one who knows the features of his mental activity, and has the skill to suit his mode of address to these. The same conditions under which he yields it when being instructed in reading or in geography must be observed when the highest of all truths is under his consideration. Religious knowledge must be presented to him in an order suited to his capacity; some parts of it are simple, others difficult; some channels of instruction suitable for early years, others for later. A proper method will show what parts should be taken up at any given period of the child's advancement, and what channels of instruction should be employed.—But religious instruction has a moral as well as an intellectual aspect: it aims not only at imparting knowledge, but at exercising an influence. This is its higher aspect. No one who teaches religion at all will profess to do so with any purpose short of this. A proper method must therefore point out with emphasis the manner in which all the parts of religious instruction may most powerfully be brought to bear on the pupil's life.

421. **Early Religious Instruction.**—The design of early religious instruction should be to impress the child with a sense of God's fatherly love and presence, so as to beget in him the sentiments of filial love and reverence for God. This is certainly not the whole of religious instruction; for God, whilst He is a loving Father, is also a righteous Judge. But it is natural for us to consider first the benigner aspect of His character: when we feel the extent of our dependence on Him and the grounds on which He claims our gratitude, we shall be the better prepared for estimating our own conduct towards Him; and that leads the way to the consideration of God as the Judge of men. Sin is the violation of the love, trust, and obedience we owe to God; if we wish to impress on the child a sense of his sinfulness, we should first impress him with a sense of his obligation to love, trust, and obey. For to speak of the moral relations subsisting between God and His creatures, which we do when we speak of sin and

punishment, without carrying the child's feelings and intelligence along with us, is the most fatal error we can commit in religious instruction, because it tends directly to interfere with the practical influence of religion upon the life. The object of parental training, guided by the unerring instinct which God Himself has given to man, is first of all to make the child feel that he is the object of parental love, and to foster in him the sentiments of love, trust, and obedience in return : it is when he is thus impressed, that the parent's words to him about his faults are felt by him to be weighty. This is the model for his first religious instruction in schools. If we can affectionately make him feel the grounds of his obligation to his heavenly Father, we shall not fail to carry his convictions with us, when we speak to him—which there will be but too soon occasion to do—of his shortcomings in respect of that love, reverence, trust, and obedience which God requires of him, and of the consequences to which these must expose him. There is an order to be observed in the presenting of moral truth to the mind just as there is in presenting intellectual : and the teacher who follows this order in his instruction will be rewarded in finding more easy of attainment the great object of all his teaching, the formation of religious sentiment in his pupil's earlier years and of religious principle in his later.

There should be no difficulty in impressing on the child's mind the Divine character and Providence, and the practical duties which the consideration of these naturally suggests :—God the Creator of all, of man, and beast, and thing ; God the Preserver of all ; His unceasing goodness, as shown in all the conditions of our being, and the works of His hands around us ; His greatness ; His omnipresence ; His holiness ; His wisdom ;—our duty to love, reverence, and obey Him ; to study what He has commanded us in His word, and to perform the services He requires of us ; to exemplify all the virtues which are well-pleasing to Him ; to refrain from that which He has forbidden, and to grieve when we have allowed ourselves to do it ; to strengthen ourselves by thinking of Him in all that we do ; to love His Son even as Himself, whom He has sent to be our great Teacher and Example, to learn His life, and to seek to imitate Him in all things ; to look up to Him to aid us in the performance of all duty, so that we feel Him constantly present with us.

422. Channels of Instruction—Narrative.—The child best apprehends religious truth by seeing it applied in action. It is therefore not by exposition of doctrine as matter of abstract propriety that we are to instruct him, but by exhibiting to him incidents from life. Biography interests and instructs him whenever he is susceptible of instruction at all, because it makes a direct appeal to his experience. And there are no biographies so interesting and so instructive as those of Scripture; from the admirable simplicity with which they are delineated, and from the unerring standard of conduct by which all the actions which they record are tried. As the child cannot read them for himself, however, the teacher must read them to him; or, where such a course is more suitable, tell their story in his own words as he would in familiar conversation with a friend, and depend on his power of description to impress the pictures vividly on the mind. When that is done, he must lead the pupil to observe the leading features in them, pass judgment thereon, to apply the conclusion to himself, and to learn to express it in the words of a Scripture precept or maxim. This is the proper mode of procedure under whatever outward form the lesson may be announced. It may be a lesson on a narrative, or on a doctrine, or on a text. Thus a lesson on the incident of God's appearance to Elijah in the wilderness, on the doctrine of God's omnipresence, and on the text, "the eyes of the Lord are in every place, beholding the evil and the good," would be identical in structure: it is the same lesson differently entitled. It is important to notice this unity of method, which is required by the child's nature, amidst the variety of outward appearance, which is required by the subject. If the teacher follows the order of *narrative* at one time, he should follow a thread of doctrinal connexion, or a textual series, for the purposes of revisal.[1]

NARRATIVE—SEPARATION OF ABRAM AND LOT.—Gen. xiii. 5-13.

INTRODUCTION.—Persons mentioned in lesson—how they came to be travelling together—their previous journeyings (briefly touched on)—where last? why? where now?—what they had with them showing their occupation and wealth?

MAIN SUBJECT—*Separation of the Patriarchs.*

1. *The Difficulty.*—Their prosperity, to what owing? God's promise,

[1] *Min. Coun.* 1844, vol. iii. pp. 502, 503.

xii. 2—in what their wealth consisted? v. 2—kind of country required for that?—grassy, and well-watered—illustrate this by ordinary observation—who would be required to take care of flocks?—herdsmen numerous (xiv. 14), as afterwards seen—district they were now in described—dangers of the situation—where quarrel began?—what about?—pasturage and wells.

2. *Abram's generosity.*—The Patriarch's temptation—what ordinary men would probably do in the circumstances—what Abram said?—reason?—how they were related—strife always unseemly, but especially so amongst brethren—another reason for avoiding it, which a good man only would have felt?—presence of Canaanites, etc.—Abram, as friend of God, felt that he should set them an example—how he avoided the quarrel—prudence of separating—who had the best right to choose? why? see xii. 1-5—disposition shown by Abram? generosity and faith in God.

3. *Lot's selfish choice.*—What Lot should have thought and done—what he felt and did—describe particularly, *lifted up his eyes, etc.—well-watered everywhere*—meadow along Jordan—*all the way* to *Zoar*, its position—*garden of the Lord*, i.e., *very fertile—before Sodom destroyed*—his care to choose the best for himself—how we should characterize his choice.

4. *Consequences.*—Who would be the happier and why? Abram's thoughts and Lot's—but, more than that, consider the actual consequences—one thing that Lot overlooked, v. 13—illustrate from experience the misery of living with bad neighbours, even amidst plenty—Lot's future troubles from war and the destruction of Sodom (briefly referred to)—from both he was saved by Abram—disposition which this shows.

   Abram remained where he was, contented—blessed still more and more—consider especially the promise given him just after Lot's departure.

Conclusion—Practical Lessons.—

1. Live peaceably with all, especially brethren—illustrate by some incident common to school-life—quote Psalm cxxxiii. 1, or Rom. xii. 18.
2. Those who know what is right ought to set a good example to others, as Abram did—compare Matt. v. 6.
3. Be generous and not selfish—the one renders happy, the other miserable—illustrate by some of the incidents of school-life—Matt. vii. 12, or Rom. xii. 10.

423. Scripture Emblems.—There is another channel of instruction by which the child's mind may be reached at this time, and that is the emblems or figurative language of Scripture.

'The Lord is my shepherd'—'the name of the Lord is a strong tower'—'we all do fade as a leaf'—'as the hart panteth for the water-brooks, so panteth my soul for thee, O God'—'keep me as the apple of thine eye'—'the righteous shall flourish as the palm-tree'—are examples from the Old Testament; but they are also common in the New, as in these examples, 'Ye are the salt of the earth'—'all flesh is grass'—'we were as sheep going astray'—'put on the whole armour of God.' Emblems are not only very numerous, but, what is of more consequence, they convey all the encouragements, hopes, duties, and experiences of the Christian life; whilst they are quickly and pleasantly learned by the child and easily retained from the conciseness of their statement, the aptness of their illustration, and the interesting associations suggested by them. There are no parts of Scripture, moreover, that more readily occur to us, or are more welcome guests to the imagination amidst the bustle of life. These lessons on emblems will be found to require one general plan. The natural image or object of reference in the figure must first be fully illustrated *in itself;* as fully as is required for the use which is to be made of it. This illustration will be longer or shorter according to the nature of the object. Sometimes the image is exclusively eastern, as when it is a feature of climate or any of the productions of the soil: in which case, since it is remote from our experience, detailed illustration will be required to bring it home with anything of its original force. Sometimes, again, the image is in itself as significant to us as it was to those to whom it was originally addressed: from its being founded on objects or scenes common to all countries or all societies. The trial of the teacher's skill in this first part of the lesson is to impress the image with sufficient strength on the pupil's imagination; the better this is done, the broader is the foundation for the interpretation which is to follow. It is in the second part of the lesson that the greatest difficulty lies. There are two dangers which the teacher must avoid: on the one hand, the spiritual sense of the emblem may be presented by him in too vague terms for any practical purpose: on the other, the analogy may be overstrained by being pursued in directions in which it does not hold, so as to weaken the force of the truth which the emblem inculcates.[1]

[1] Stow's *Bible Emblems.*

EMBLEM.—'I WILL BE AS THE DEW UNTO ISRAEL.'

INTRODUCTION.—Walk in the fields in a summer morning—appearance of whole described—surprised on a clear, dry, warm morning to find our feet all wet—what makes them so—dew on the grass—where come from? (It would be expedient to have had a previous lesson on 'dew;' if this has not been given, then a general answer must be given to this question.)

I. NATURAL IMAGE—THE DEW.—

1. *The refreshing power of the Dew.*—What is required for the growth of plants? amongst other things, moisture—where got—from rain—but often no rain—long tracts of dry weather, which would scorch the plants—so that rain not enough, moisture wanted frequently and regularly—the gardener waters the delicate flowers, but the wide fields want this as well—it is the *dew* that does it—keeps them fresh, and the plants full of sap, when from want of rain they would apparently wither.

   The rainy and dry seasons in East—greater strength of sun there and longer drought—what required therefore—more dew—so it is greater—little water-courses filled with it, as after rain with us—how much they value the dew in such countries.

2. *Silent action of the Dew.*—How we know it rains, when perhaps we are busy in school—rattling sound of the drops—can we notice the coming of the dew—no, although we were watching—gradually drops from the cooled air and spreads over the whole plant—silently and invisibly—but we know in the morning that it is there.

II. THE SPIRITUAL TRUTH.—

1. *The blessing of God like the Dew.*—Revert again to the languishing flower—flowers not the only things that languish—cattle, ourselves, weary with work—what we need? rest to refresh us—but there is something else to weary us out than toil—pain, anxiety, and grief, from various reasons—calmed by time and the comfort of friends—another source of weariness and anxiety to us is sin—illustrate how it oppresses us, when we reflect afterwards upon it—what is to calm this—no earthly friend—God alone can pardon—and help us against it in future—what a comfort in this, to be able to trust in Him—that makes us fresh, and glad, and hopeful again—just as the plants look when refreshed with dew.

2. *God blesses us in silence, like the Dew.*—Many people don't know the blessings God gives them—if a friend gives them something, they know it—they look on God's gifts as not gifts at all, but things which belong to them—name some of the chief blessings of life—the aid He promises when we are in any distress—yet he sends them all in

silence and without being seen—His mercies felt only by the thankful—men find themselves surrounded with blessings quietly, just as the plant is covered with dew.

CONCLUSION.—Seek blessing from God—in all difficulties look to Him, and ask Him for help—look with confidence, for He has promised—advantage of being His people. (Emblem repeated.)

424. Scripture-Reading.—The materials of religious instruction already adverted to do not cease to be useful for junior classes of the common-school; but the pupils of these classes are sufficiently advanced to be able to read Scripture for themselves as the basis of their instruction. This accordingly is the place for remarking on the use of Scripture as a reading-book in schools.

The Bible should not be used as an ordinary text-book for teaching reading. In many districts the circumstances of the school have made this a necessity; but that necessity can hardly be said to exist, now that so much facility is given for the acquisition of school-books. Nothing tends to degrade Holy Scripture more in the eyes of both pupil and teacher than this practice. Both are apt to attach unpleasant associations to it; the former looking on it as his *task-book*, which has caused him much trouble and, it may be, frequent punishment; the latter regarding it as the field for his routine toil, and losing sight of its claims on himself as an individual from the familiar professional way in which he is obliged to handle it. It may be, as it has been urged on behalf of this practice, that it must give the child an intimate acquaintance with the text of Scripture; but if such a statement means to convey that it imbues their minds deeply with its meaning and spirit, unanimous experience is at hand to testify against the fact. Scripture is always found to be better understood, and more deeply reverenced, in those schools where it is regarded not as the instrument for learning the art of reading, but as the end for which that art is acquired.

A class should not be set to the reading of Scripture too soon. Nothing is more painful than to hear them destroying, we might almost say desecrating, its language by strange blunders, or by spelling out almost every word; and nothing can be more unprofitable to themselves, either intellectually or morally. The oral-teaching of it should continue till they have acquired some fluency in reading; and the teacher who is laudably anxious to set

before them its own words, should remember the resource which he has for this purpose in himself reading to them.

More attention should be paid than is commonly done to the order of Scripture-reading in a class. The sacred volume contains books of various complexions: some historical, others codes of laws, others prophetical, others preceptive, others devotional, and others doctrinal and argumentative. It would not be necessary to remark that these are not all equally suitable for children, did not experience show that it sometimes appears to be thought a merit, or even a matter of necessity, to carry a class mechanically through the precise order of the Scriptures from first to last. Certainly there is often much lack of judgment shown in selecting both the books and the passages read in classes. It is obviously the narrative, the preceptive, and the devotional parts of Scripture that are fitted for junior classes. The use of the devotional parts will be referred to presently; the preceptive parts are most effectively read in connexion with those parts of the narrative which illustrate in action what they teach in words: so that it is with the narrative, that is, the biographical and historical parts that we have mainly to do in arranging the course of Scripture-reading for such classes. Precedence will be universally allowed to the Gospel history, as being the basis of the Christian religion, and as exhibiting it in its highest form, both in words and in life; and then to the early narratives of the Old Testament, from their wonderful simplicity of construction, transparency of meaning, and richness and directness of moral teaching. Next to these the Acts of the Apostles and the historical books of the Old Testament claim attention. But the teacher should reserve to himself liberty to keep back certain parts of all these books, which, being of a technical sort, *e.g.*, genealogical, geographical, or ceremonial, are not fitted for the instruction of children of tender years. To bring to a point all that has been said;—let him take as his guide in selecting the Scripture-reading of his class this consideration, that both his pupils and himself are chiefly concerned to know those parts of it which most clearly and directly teach and exemplify the blessed Gospel of the Son of God *as an influence on the life.*

The reading of Scripture will introduce the pupils to materials for instruction of a different sort from the biographical or histo-

rical, viz., the parables of our Lord; the teaching of which is so important as to require some special consideration.[1]

425. **Parables.**—It would be difficult to give any definition of a parable to which exception may not be taken, from the great variety of construction existing among the compositions which pass under that name. But, though we had such a definition, it would not greatly serve our present purpose; which is, not to find the correct theory of their structure, but the best mode of teaching them so as to bring out their force and beauty. It will be sufficient for us to notice the leading feature of a parable, viz., that it has two aspects, the one literal, the other figurative and spiritual, and that the spiritual truth is conveyed by the analogy of the literal representation. Viewed on one side, a parable is a story, setting forth some incident in nature or in human life, real or imaginary, and having an interpretation complete in itself; viewed on its other side, it is the language of symbol teaching us our duty to God or to man.

The method of teaching by parables is in the highest degree interesting and instructive. It is interesting, because the mind, even of the unenlightened, readily apprehends and retains such representations as they embody, from their dealing with things which experience has made familiar to all, or with things similar to those of actual experience. Our Saviour addressed them to audiences, which were often ignorant, and, where not ignorant, unfriendly, nay, openly hostile: yet we see from various indications that attention and interest were always roused when he spoke in parables. And they are not less calculated to rivet the attention of children; who always turn from the abstract to the concrete, from the general principle to the particular action embodying it.—The parables, besides being interesting, are also instructive. They are devoted to unfolding the great moral duties of religion, the performance of which is at once the test and the end of true religion. They have all a strikingly practical purpose, and they are strikingly fertile in suggestions. It is not only their one leading lesson that is enforced on us; numberless incidental lessons spring up by the way as we advance from part to part of the narrative. Moreover, they are all as applicable to our circumstances as to the circumstances of those who first heard

[1] *Min. Counc.*, 1846, vol. ii. p. 474; 1847, vol. i. p. 3; 1849, pp. 73, 74.

them. None of them are obsolete ; all are fresh as when they first flowed from the lips of the great Teacher. They rouse our sympathies as much as they did those of the Jews ; and they will rouse the sympathies of men under any of the conditions of human life as much as they do ours, because the incidents they build upon occur in the life of every society, and because the elements of character, and the affections to which they appeal, are the same at all times and in all places.

In expounding a parable, the story or literal side of it must first be illustrated. All remarks necessary for a comprehension of the incident should be made here, *e.g.*, remarks on the geography of the scene or on the manners and customs to which allusion is made, that they may not afterwards interrupt the interpretation. The great merit of this part of the lesson is that it be clear and graphic, so as to impress the pupil's imagination. In interpreting the parable, the story should be taken in parts, and each part have affixed to it that spiritual meaning of which it is the symbol. There are, as in the case of the emblems, two faults to which this part of the lesson is specially incident. The one is vagueness ; arising from the teacher failing to apprehend the precise aim of the parable with sufficient force, and, under the appearance of making it teach a great many things, making it teach nothing in particular. The other is overstraining of the analogy, which results when the story is pushed so far into detail as to cause distortion of the spiritual truth in carrying out the parallel between them. If the story itself is well illustrated, the reflections which it suggests will be seen to be very near at hand and on the broad surface of the narrative, so that no minute or circuitous inference can be needed. What is of chief importance here is to see that they be distinctly and impressively enunciated. The test of success in teaching a parable is the manner in which the practical conclusions deduced from it are brought to bear on the circumstances of those addressed. It is in this part of the lesson that there is more room for amplification and detail. It is to no purpose that the story is graphically told or that the inferences therefrom are just, if the duty which it is designed to impress is not carried home to the consciences of the pupils. Where this is not habitually done, instead of regarding the truth in the parable as a thing claiming to be received into their hearts and to influence their lives, they

view it as they would any fact or custom of ancient times, as a thing to be known it may be, but not as having any vital connexion with what they do from day to day. They project it from them and see it only in the distance; they apply it to Jew or Samaritan, Pharisee or Publican; but for the men of the present day, for themselves, it has no voice. And thus a habit of considering Scripture is fostered, quite fatal to that devout self-appropriating use of it which we cannot but feel to be its only effectual use.—After exposition, the parables should be committed to memory.[1] (§ 429.)

Parable of the Leaven.

Introduction.—Question the class on 'baking' as they have seen it at home, the materials and the process—how the baker makes his dough—something more used by him—*yeast* or *leaven*? change next morning in the dough in appearance and in taste—through all its parts. (Parable read.)

I. The Story.—The woman about to bake bread—meal or flour, how much?—three measures a quantity commonly used, Gen. xviii. 6—the water—and then the *leaven*—leaves it for a time—nature of the change that passes on the dough, illustrated from the introduction—gradual, entire.

II. The Spiritual Meaning.—

1. *The change.*—By the change upon the dough is meant a change on ourselves—what it is (in a general sense)—appeal to the pupils' experience of themselves—all do wrong, illustrate by referring to particular acts or thoughts—thus all are sinful—how God regards this—before we can please Him we must be *changed*—just as the dough must be changed before it becomes bread.
2. *Cause of the change.*—What is here likened to leaven?—"Kingdom of heaven" must mean something felt on earth amongst men, since Jesus was speaking of man—precise form in which the explanation of these terms is given must depend on the advancement of the class—with a young class, sufficient to give the idea that it is the 'love of God in our hearts'—refer to the love they bear their parents—how it influences their whole conduct—take some illustration—so if we love God we shall love and do what is pleasing to Him at all times.
3. *The change gradual.*—Suppose the dough examined at short intervals after the leaven is put in, what would be its appearance?—the woman *had to wait* for the change—not as doubting, but certain that it would happen in time—no one can change himself all at once—refer to some

[1] Trench *on the Parables.*

habit to illustrate the difficulty of changing and the time needed—but, if we love God, we shall be changed by degrees—first one bad act, then another, first one bad thought, then another, as we grow up—till the change is entire—however slow and imperceptible, it is sure.

4. *The change complete.*—What like was the dough when the woman came back to it? suppose a bit cut off as far away as possible from the centre where the leaven was put in—if it goes on gradually, what must happen in the end? entire change—this must be the nature of the change upon ourselves—every bad act, bad word, bad thought, given up—even those in secret—all we do will be done to please God.

Conclusion—Practical Lesson.—

1. All need to be changed—we *can obtain the thing* needed to change us—we know God, and therefore we can *love* Him—may know without loving Him—it is the love alone that changes, by making us do what is pleasing to Him—let us therefore seek to love Him.
2. If we love Him, what will our conduct be—we shall avoid sin; sinful acts, etc.—grow better day by day—always strive to become better, and live in the hope of becoming better, till He shall take us to Himself, 1 Cor. x. 31.

*** The historical sense of this parable would form the subject of another lesson.

426. Doctrinal Instruction.—There are two ways in which instruction in the doctrines of religion may be given to a class:—The one is by inference in the course of its ordinary Scripture-reading, and the other is by means of special text-books for the purpose, which are for the most part in the form of catechisms. The latter are in so common use that, when we speak of the means of doctrinal instruction without any qualification, we are understood to refer to them. At the same time, they are not indispensable for such instruction, but only indispensable, as will presently appear, that it may be given in a certain form.

The universal use of catechisms is explained by two considerations.—(1.) The order of the Scripture narrative is not such as to exhibit a connected scheme of doctrines. These have to be elicited by a comparison of various parts of it with one another. It is the object of the catechism to gather up the results thus arrived at, arrange them in an order more or less scientific, and express them in a concise form; it may be, adding references to Scripture as authority for its statements.—(2.) Since the enunciation of doctrines is not simply the quotation of Scripture words, but im-

plies an interpretation of them, in which there may be, and are, very great differences of opinion among men, various religious bodies have found it necessary to exhibit their own views in their own words for the instruction of their members. The teaching of a catechism is, therefore, part of the work of the teacher in all the common-schools connected with the churches of the country; whence there is an obligation on him, both to know well the doctrines it sets forth, and to apply all the resources of his art to its illustration.

With reference to any particular catechism, the teacher must use his discretion in determining at what time his pupils should begin the study of it, and in what order its contents should be presented to them. If a young class is required to learn a catechism which is suitable only for an advanced, they will not only be entirely unimpressed by it at the time, but they may never come to have that perception of its meaning which a more judicious management would in due time awaken in them. The importance of a subject must always be considered in connexion with the intelligence of the pupil. Generally speaking, a catechism is not a suitable medium of instruction for the youngest children, from its abstract nature. If they must learn one, it should be one written expressly with a view to their use, and should be used just as a summary of the results of their oral instruction. Again, the teacher is under no necessity of teaching the catechism in the order in which it is compiled; the order of teaching may, in this as in other subjects, differ from the order of compilation. Systematic treatises on theology for the most part begin with the consideration of the nature, character, and purposes of God, and proceed downwards to the relations in which man stands to Him, and the duties suggested by these relations; and in this order, which may be regarded as the scientific order of the subject, may a catechism be constructed. But a different order might be pursued; which should commence with a consideration of our relations to God, our nature and character as shown by experience, our wants as deduced therefrom, and proceeding outwards and upwards till we arrive at that which would now form the concluding stage, the nature and attributes of God. The teacher is free to follow either of the two orders that seem to him most suited to the circumstances of his class.

In expounding particular questions, the following directions deserve his attention :—(1.) As they follow each other in close connexion, his first duty is to establish the connexion between that one which is the subject of his lesson and the preceding.—(2.) As they are expressed in terse language, he must weigh carefully each word and phrase, so that, in bringing out what it expressly states, he may not overlook what it contains by implication.—(3.) The object of his exposition should not be to import into the question more of subtle distinction and technical theological phrase than the question itself contains, but rather to divest these of their difficulty by couching his instruction in the language of every-day life.—(4.) The catechism is not exempt from the general law of all religious instruction, viz., that it should not stop with the imparting of information, but should aim at being an influence. Every question should therefore be carried out to some practical issue.—(5.) The answers must be accurately committed to memory by the pupils ; but always after some exposition has been given, that the memory may be aided by the intelligence.

The following is a doctrinal lesson on a text of Scripture :—

1 Cor. i. 22-24.

Introduction.—Two classes of men into which the world was divided before Christ—how they differed in their knowledge and their worship of God—peculiarity of Jews as chosen people, having God's law, and promise of Messiah to come—Gentiles, left to themselves—most remarkable Gentile nation, the Greeks—its wise and learned men—what they most valued.

Main Subject—*Jews require a sign.*—What part of Jewish Scriptures spoke of Messiah—how they describe Him—as a king, etc.—in what sense meant—how the Jews understood them—a mighty prince to free their nation from dominion of their enemies—at this time they were in expectation of such a Messiah—His power and victories were to be the sign that He was the promised one—"They require a sign."

Greeks seek after wisdom.—They knew not the true God—worshipped what ?—many wise men who were above the common people and did not—kind of questions they thought of—immortality of soul and the like—the doubts that beset them—waited for some philosopher of superior wisdom to tell them of these things—'They seek after wisdom.'

Thus the Jews expected a great prince as their deliverer, the Gentiles a great philosopher.

We preach Christ crucified.—Compare with these expectations the real Messiah—sketch His life—humble, poor, suffering, and finally crucified—how different from what Jew and Gentile expected the Messiah to be.

To the Jews a stumbling-block.—How the Jews would receive Him, with their expectations—no wealth, or power, or worldly greatness, but poverty and humble lot—no deliverance from their enemies, but for Himself a shameful death—what they would think—perplexed—disbelieved Him and were thus kept from God—He was an obstacle in their way, a stone, as it were, on which they stumbled, a 'stumbling-block.'

To the Greeks foolishness.—They did not hear Himself, but His disciples preaching His doctrines—outline of doctrine which they preached, man's sinfulness and need of repentance, a holy life here and a better life after death, as Paul preached at Athens—how they received this? with wonder and mockery—instead of their favourite doctrines discussed by a great man, they were taught how to live so as to please God, and that by one who belonged to the despised Jews—this offended their pride and their learning, and they thought it 'foolishness.'

To them who are called.—Did all receive Him so?—some listened to Him humbly, believed Him, loved Him, followed Him—they were willing to learn, and God helped them to understand—these disciples spoken of as having been *called*, *i.e.*, called by God, to be His children—mention some who were called—both Jews and Greeks or Gentiles.

The power of God and the wisdom of God.—What Christ does for those who believe in Him—He shows them how to lead a holy life, to have their sins forgiven, and to be accepted with God—all who love Him obtain these blessings, they think of Him, and, seeing how sinful they are, ask forgiveness—they strive to imitate His example and become like Him—and their sins are pardoned for His sake—what does God think of those who thus receive Him?—what will be their end? salvation.

How they regard Christ—as coming from God and as perfectly able to save them, *i.e.*, as 'the power of God'—and as pointing out a way of salvation which is altogether suitable to the wants they feel, *i.e.*, 'the wisdom of God'—the *perfect* means of salvation, and the *only* means.

Conclusion.—*Practical Lesson.*—Same blessings open to us—let us listen to Him—He knows how to make us good and happy, and He is able to do it—He will do it, if we put aside pride and humbly seek to love Him.

NOTES ON BOARD DURING EXPOSITION AND FOR REVISAL.

Before.	*Christ's coming.*	*After.*
Jews wished sign. Greeks wisdom.	Christ crucified.	Stumbling-block. Foolishness.
Those who are called.		Wisdom of God. Power of God.

427. The Spirit of Controversy.—Whilst judicious doctrinal instruction is a necessary part of religious instruction in general, the teacher should guard against giving a controversial aspect to his teaching. We have already had occasion to observe (§ 21) that the best, indeed the only effectual way to exclude error from the mind, and vice from the conduct, is to teach what is true and right. If children are intelligently instructed in sound doctrines, whether of morality or of religion, they will be fortified against such as are false in a way in which they never can by a merely negative or controversial teaching: they grow up, so to speak, with a feeling of their falsehood. Attachment to the truth can only rest on a love of it resulting from their frequent contemplation of its own features; and can never arise out of a mere conviction of the unsoundness of their neighbour's beliefs. It happens but too generally in controversial teaching that the really important matters of religious doctrine are sunk out of view, and minor ones unduly magnified; for it is only with the outside of doctrinal systems that controversy (generally speaking) concerns itself, and not at all with such as pertain to life and godliness. And not only does the spirit of religion suffer by being put out of sight, it is crushed by the victorious antagonism of the spirit of controversy, which is essentially one of malice and uncharitableness.

Controversy has undoubtedly its own place; but that is in the thoughts of men of matured judgment and of educated Christian life, for these alone can withstand its temptations. With the young, who have neither, and who need both, it is entirely out of place. A person whose mind is set keenly on religious controversy must therefore be held to be deficient in the prudence and the temper which should regulate the office of the elementary teacher, and most of all of the teacher of a common-school,

amongst whose pupils the distinctions of sect are supposed to be unknown.

428. **Additional Subjects of Instruction.**—The materials of Religious Instruction which have now been considered remain suitable for pupils of whatever age; but if, from the length of attendance at school, their instruction admits of being extended, then ample materials remain for this purpose. They are—and we shall simply notice them—the Epistles of the New Testament, the principal prophecies in the Old, and the Jewish Economy. It may he observed, however, that the pupil need by no means be ignorant of these, even though he has not the time to study them systematically: for they must be taught incidentally to his reading of the Scripture narrative, in a greater or less degree. In speaking of the Epistles as parts of school-instruction, it is the preceptive parts of them which we have in view; there is constant occasion to refer to these in confirmation of the lessons deduced from Scripture history and from the parables. Again, various important prophecies are introduced in course of the Gospels and the Acts of the Apostles, which give occasion for illustrating those of them which relate to the Messiah: whilst the exposition of the daily-lesson, whether taken from the Old Testament narrative or from the New, requires the explanation of the Jewish rites and customs which are everywhere interwoven with the incidents contained in it.—The geography of Scripture should be provided for in the geography-lesson; as mere incidental reference to it must fail to give a sufficiently connected knowledge of the subject.

429. **Intelligence and Memory.**—It is assumed that the teacher is alive to the importance of addressing all his religious instruction in the first instance to the intelligence: all healthy spiritual culture must rest permanently on intelligence as its basis. He should therefore strive to interest them by carrying their minds along with him; and so to avoid the evil consequences that are sure to result from treating the religious lesson as mere routine. Children cannot but afterwards feel repugnance to what has been made distasteful to them in early years. But in appealing to their intelligence, he must not overlook the memory. In youth the memory should be stored with the precious words of Scripture; so that we may be able to contemplate them independently of time, place, and circumstances. Once intelligently

lodged in the mind, they are certain to recur to it, whether expressly summoned or not; for it is not absolutely master of its own workings. No one can set limits to the good which may result from this practice. In seasons of solitude, danger, sickness, and old age, the seed that may have long lain dormant may suddenly spring up, sending forth blossom and fruit. The teacher should therefore have a judicious and systematic scheme according to which his pupils commit selected passages of Scripture to memory, in addition to the psalms and hymns which it is now the common practice for them to learn.[1]

430. Practical Aspect of Religious Instruction.—The end of all the religious instruction which is given is to enlighten the conscience and purify the life. If it fails in this, it fails on the whole, for no special value is to be attached to it in its mere intellectual aspect. In point of fact, it does frequently fail in this: there is a constant tendency to forget the religious lesson as a religious exercise, and to look at it solely as the acquisition of knowledge. Hence elaborateness of exposition is much more common than earnestness and affectionateness in urging home the truth to personal acceptance. The exercise of the moral judgment upon the conduct exhibited in the lesson is not to be confounded with this personal application. It is comparatively easy to judge of others; not so easy, though more essential, to judge ourselves. The teacher should therefore understand that, after the pupils recognise the truth as exhibited in the circumstances of others, he must still appeal to corresponding circumstances in their own lives, and show the bearing of the truth upon these. In doing this, his influence over them is tested in a way in which it is not in any other part of the school-work. For he is here out of the region of mere instruction; it is not the maturity of his reason or the force of his authority on which his success depends, but the nature of his personal relations with the pupils. It is here that the teacher who has the ascendency which their love and regard alone can give him, finds the means of moving their sensibilities and moulding their character. His admonitions here "represent those which a religious parent is accustomed to address to his children, with a personal application to the conscience of each and an individual knowledge of its necessities, and which, appeal-

[1] *Min. Counc.*, 1849, vol. ii. p. 475.

ing to the heart and affections, have an influence with children greater than that which they yield to reason or authority." He is here appealing "to those sensibilities which are the springs of action in childhood, and the elements out of which the Christian character collects itself in youth and manhood." An earnest and affectionate manner must be combined with forethought and discrimination in selecting the truths to be urged and the circumstances to which their application is to be shown; these will seldom altogether fail of effect: whereas a routine professional mode of address will not only fail, but harden the very sensibilities which it pretends to arouse.[1]

[1] Part I. chap. iv.; *Dick Bequest Report*, 1854, chap. xviii.

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